As filed with the Securities and Exchange Commission on October 6, 2014.

Registration No. 333-198666

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

AMENDMENT NO. 1
TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

XENON PHARMACEUTICALS INC.

(Exact name of registrant as specified in its charter)

Canada	**2834**	**98-0661854**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

200 – 3650 Gilmore Way
Burnaby, British Columbia V5G 4W8
Canada
(604) 484-3300
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Simon N. Pimstone
President and Chief Executive Officer
Xenon Pharmaceuticals Inc.
200 – 3650 Gilmore Way
Burnaby, British Columbia V5G 4W8
Canada
(604) 484-3300
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box: ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer (Do not check if a smaller reporting company) ☒ Smaller reporting company ☐

CALCULATION OF REGISTRATION FEE

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED (1)	PROPOSED MAXIMUM OFFERING PRICE PER SHARE	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE (1)(2)	AMOUNT OF REGISTRATION FEE (3)
Common Shares, no par value per share	4,600,000	$12.00	$55,200,000	$7,066.29

(1) Estimated pursuant to Rule 457(a) under the Securities Act of 1933, as amended. Includes an additional 600,000 shares that the underwriters have the option to purchase.
(2) Estimated solely for the purpose of calculating the registration fee.
(3) The registrant previously paid a fee of $6,665.40 in connection with the initial filing of this Registration Statement on September 10, 2014 with respect to $51,750,000 of the proposed maximum aggregate offering price.

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment that specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED OCTOBER 6, 2014

PRELIMINARY PROSPECTUS

4,000,000 Shares

Xenon Pharmaceuticals Inc.

Common Shares

We are offering 4,000,000 of our common shares. This is our initial public offering and no public market currently exists for our common shares. We expect the initial public offering price to be between $10.00 and $12.00 per share.

We have applied to list our common shares on The NASDAQ Global Market under the symbol “XENE”. We are an “emerging growth company” as defined by the Jumpstart Our Business Startups Act of 2012 and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings.

Investing in our common shares involves a high degree of risk. See “Risk Factors” beginning on page 13 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	PER SHARE	TOTAL
Initial Public Offering Price	$	$
Underwriting Discounts and Commissions[1][2]	$	$
Proceeds, before expenses, to us	$	$

(1) The underwriters will also be reimbursed for certain expenses incurred in this offering. See “Underwriting” for details.
(2) Exclusive of fees payable in connection with the concurrent private placement. See “Underwriting” for details.

Delivery of the common shares purchased in this offering is expected to be made on or about , 2014. We have granted the underwriters an option for a period of 30 days to purchase up to 600,000 additional common shares. If the underwriters exercise the option in full, the total underwriting discounts and commissions will be $ and the total proceeds to us, before expenses, will be $.

Pursuant to the terms of our common share put agreement, an affiliate of Genentech, Inc., one of our pharmaceutical partners, will purchase $5.0 million of our common shares in a separate private placement, concurrent with the completion of this offering, at a price per share equal to the initial public offering price. The sale of such shares will not be registered under the Securities Act of 1933, as amended. The closing of this offering is not conditioned upon the closing of the concurrent private placement.

Under the terms of our collaboration agreement, Teva Pharmaceutical Industries Ltd., or Teva, one of our pharmaceutical partners, or an affiliate of Teva will purchase $10.0 million of our common shares in this offering at the initial public offering price. The underwriters will receive the same discount from any common shares purchased by Teva or its affiliate as they will from any other common shares sold to the public in this offering.

Joint Book-Running Managers

Jefferies **Wells Fargo Securities**

Co-Manager

Canaccord Genuity

Prospectus dated , 2014

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We and the underwriters have not authorized anyone to provide any information other than that contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We and the underwriters are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only as of the date on the front cover of this prospectus. Our business, financial condition, results of operations and prospects may have changed since that date.

Until , 2014, all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

In this prospectus, unless otherwise specified or the context otherwise requires, all dollar amounts are expressed in U.S. dollars.

As of June 30, 2014, the exchange rate for the conversion of Canadian dollars into U.S. dollars was 0.9372, based on the Bank of Canada's closing rate. Except as otherwise noted, all amounts referred to in this prospectus as "$, as converted" shall mean the U.S. dollar amount applying the conversion rate from Canadian dollars as of June 30, 2014.

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus and is qualified in its entirety by the more detailed information and financial statements included elsewhere in this prospectus. It does not contain all of the information that may be important to you and your investment decision. You should carefully read this entire prospectus, including the matters set forth under "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes.

Unless the context requires otherwise, in this prospectus the terms "Xenon," "we," "us," "our" and "our company" refer to Xenon Pharmaceuticals Inc.

Xenon Pharmaceuticals Inc.

Overview

We are a clinical-stage biopharmaceutical company discovering and developing a pipeline of differentiated therapeutics for orphan indications that we intend to commercialize on our own, and for larger market indications that we intend to partner with global pharmaceutical companies. We have built a core enabling discovery platform for the discovery of validated drug targets by studying rare human diseases with extreme traits, including diseases caused by mutations in ion channels, known as channelopathies. We have an integrated platform that includes in-house capabilities for human genetics, small molecule drug discovery and preclinical and clinical development.

Our business was founded on our proprietary discovery platform, which we refer to as Extreme Genetics. Extreme Genetics involves the study of families where individuals exhibit inherited severe traits, or phenotypes. By identifying and characterizing single-gene defects responsible for these phenotypes, we gain insights into human disease biology to better select targets for therapeutic intervention. Our Extreme Genetics discovery platform has yielded the first approved gene therapy product in the European Union, or the EU, a broad development pipeline and multiple pharmaceutical partnerships.

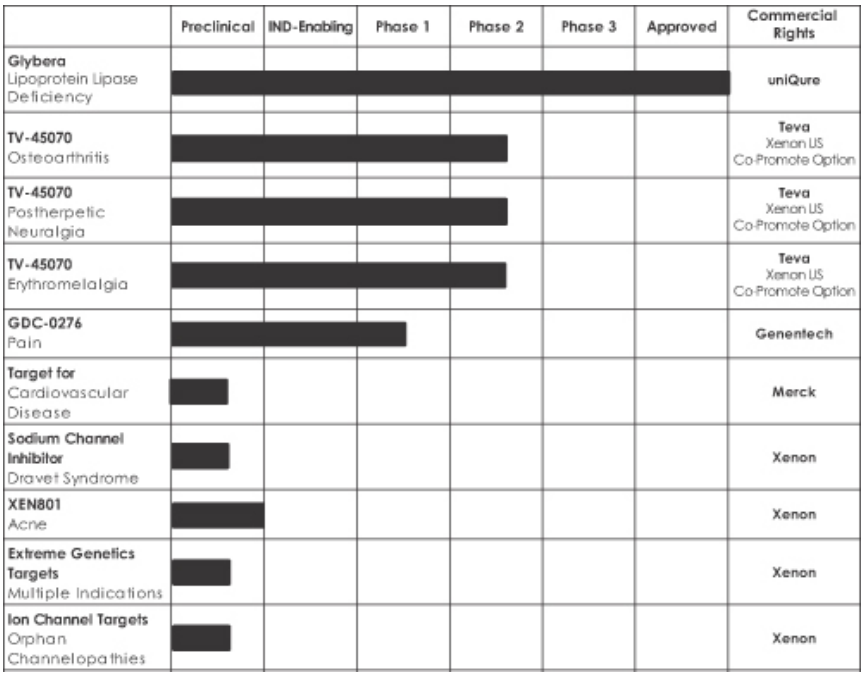
Our pharmaceutical partners include Teva Pharmaceutical Industries Ltd., or Teva, Genentech, Inc., or Genentech, and Merck & Co., Inc., or Merck, (through its affiliate, Essex Chemie AG). Our pharmaceutical collaborations have generated in aggregate over $140.0 million in non-equity funding to date with the potential to provide us with over $1.0 billion in future milestone payments, as well as royalties and co-promotion income on product sales.

Our most advanced product candidate is TV-45070 (formerly XEN402), which we have partnered with Teva (through its subsidiary, Ivax International GmbH). Teva is currently conducting a 300-patient, randomized Phase 2b clinical trial of TV-45070 in osteoarthritis, or OA, of the knee and is currently planning additional development of TV-45070 in neuropathic pain indications. A second product candidate, GDC-0276, is being developed in collaboration with Genentech, for the treatment of pain. In September 2014, Genentech initiated a Phase 1 clinical trial for GDC-0276.

We have coupled our Extreme Genetics discovery platform with our integrated drug discovery capabilities, including significant ion channel expertise, to build our product pipeline. Our pipeline is balanced with both proprietary assets for orphan indications that we believe we can develop and commercialize independently and partnered assets in larger therapeutic markets that require significant commercial capabilities. We have implemented our strategic alliance model to establish well-structured partnerships that have front-loaded our product pipeline with near-to-mid-term market opportunities, and that have provided significant non-equity funding to date as well as substantial potential future milestone payments. Since inception, we believe that we have operated in a capital-efficient manner, and, as of June 30, 2014, we have cash, cash equivalents and marketable securities of $44.7 million, which figure excludes an $8.0 million milestone payment we received in August 2014 from Genentech. Since our last equity financing in 2006, we have funded our operations and expanded our platform, product pipeline and infrastructure through a combined strategy, including deploying our own resources and establishing our partnerships. We focus on execution of our corporate goals and partnering obligations, and, as a

result, we believe we are well-positioned for potential value-creating inflection points in the near-term in both our partnered and proprietary programs, including the potential receipt of up to $32.5 million in milestone payments under our existing collaboration agreements, over the next 24 months.

The following chart summarizes our current product pipeline, including partnered and proprietary Xenon programs:



Our Programs

Approved Product

Glybera: Glybera is the first and currently the only gene therapy product to receive commercial approval in the EU. Glybera, developed by our licensee uniQure Biopharma B.V., or uniQure, is specifically indicated for the treatment of a subset of adult patients diagnosed with the orphan lipid disorder lipoprotein lipase deficiency, or LPLD, confirmed by genetic testing and suffering from severe or multiple pancreatitis attacks, despite dietary fat restrictions. LPLD is a severe metabolic disease of inadequate lipid metabolism, resulting in pancreatitis and, in some cases, death. Together with collaborators from the University of British Columbia, or UBC, we demonstrated that humans with a single gene variant of the lipoprotein lipase, or LPL, gene called LPL^{S447X}, resulted in increased LPL enzyme activity leading to reduced triglyceride levels. Under our sublicense and research agreement with uniQure, we collaborated with uniQure and UBC on preclinical activities, and thereafter uniQure developed an LPL gene therapy product, Glybera, which contains the LPL^{S447X} variant. We believe that the introduction of the therapeutic LPL^{S447X} gene through administration of Glybera provides a clinical benefit for a subset of LPLD patients.

Glybera is the first product whose active ingredient was derived from our platform to receive commercial approval. The goal of Glybera therapy is to treat LPLD in order to achieve sustained improvement of clearance of triglyceride-rich lipid particles known as chylomicrons, and to significantly reduce the risk of pancreatitis

attacks in patients suffering from multiple recurrent pancreatitis and abdominal pain events. Glybera was developed by our licensee, uniQure. In 2012, Glybera was approved in the EU and, in July 2013, uniQure announced that it had entered into a partnership with Chiesi Farmaceutici S.p.A., or Chiesi, for the commercialization of Glybera in the EU and more than a dozen other countries, including Brazil, China, Mexico and Russia. We believe that Chiesi plans to launch Glybera in the fourth quarter of 2014 or the first quarter of 2015 in Europe, and that uniQure is pursuing a U.S. product approval strategy, with plans to file a Biologics License Application, or BLA, with the U.S. Food and Drug Administration, or FDA, following receipt of the results from a planned Phase 4 trial expected to begin in mid-2015. Glybera has received orphan drug designation for the treatment of LPLD in both the EU and the U.S.

We are eligible to receive mid single-digit royalties on net sales of the licensed products, for sales made by uniQure and its affiliates. The royalty rates are reduced to a low single-digit for sales made by uniQure and its affiliates in countries where a licensed technology or a licensed product is not covered by a valid patent claim. With respect to uniQure's sublicense to Chiesi, we are eligible to receive a percentage in the low twenties of all non-royalty compensation relating to the licensed technology or products that uniQure receives from Chiesi (for example, upfront payments and milestone payments), a percentage in the low twenties of any royalties that uniQure receives from Chiesi based on sales of technology or products covered by the licensed patents, plus a mid single-digit percentage of certain further royalties that uniQure receives from Chiesi based on sales of our licensed technology or products after the expiration of all licensed patents covering the product.

Product Candidates in Development

TV-45070 for the Treatment of Pain: TV-45070 (formerly XEN402) is a small-molecule inhibitor of the sodium channel Nav1.7 and other sodium channels, including those that are expressed in the pain-sensing peripheral nervous system. TV-45070 has potentially broad application in nociceptive pain, mediated by damage or injury to tissues, including the pain sensitivity caused by inflammation, and neuropathic pain mediated by damage, dysfunction or injury of nerves. TV-45070 is partnered with Teva. Pursuant to the terms of the agreement, Teva is obligated to complete three Phase 2 or later stage clinical trials. Using a topical ointment formulation of TV-45070, Teva has initiated a 300-patient, randomized Phase 2b clinical trial in OA of the knee with data expected in the third quarter of 2015. Teva is also developing topical TV-45070 in neuropathic pain indications, and is planning a Phase 2b clinical trial in patients with postherpetic neuralgia, or PHN, that is expected to start in the first half of 2015. In addition, we are working with Teva to evaluate the opportunity to develop TV-45070 for the orphan disease erythromelalgia, or EM. TV-45070 has received both fast track and orphan designations from the FDA for the treatment of EM.

We selected Nav1.7 as a drug target for pain after we discovered that the Nav1.7 protein is deficient in the rare genetic disorder congenital indifference to pain, or CIP, sufferers of which are unable to feel pain. We have observed promising evidence of activity for TV-45070 in four Phase 2 proof-of-concept clinical trials, including two trials in EM, one trial in PHN and one trial in dental pain, a form of nociceptive pain.

In December 2012, we entered into a collaborative development and license agreement with Teva, pursuant to which we granted Teva an exclusive worldwide license to develop and commercialize TV-45070. Under the terms of the agreement, Teva made an upfront payment to us of $41.0 million. In addition, we are eligible to receive potential milestone payments totaling up to $335.0 million, comprised of a $20.0 million clinical milestone payment, up to $285.0 million in regulatory milestone payments, and a $30.0 million sales-based milestone payment. If TV-45070 is approved, we are also eligible to receive royalties in the low teens to the low twenties on net sales of the licensed products for the timeframe that such products are covered by the licensed patents and in certain other instances. We have an option to obtain a 20% to 30% co-promotion interest for products incorporating TV-45070 in the U.S., which is exercisable upon the filing of the first new drug application, or NDA, for a TV-45070 product. If we exercise this option, upon paying an opt-in fee to Teva, we will be eligible to receive, in lieu of royalties with respect to such product sales in the U.S., a share of operating profits from any product sales in the U.S. that is equal to our percent interest of detailing activities and co-promotion expenses.

GDC-0276 and Other Selective Inhibitors of Nav1.7 for the Treatment of Pain: In December 2011, we entered into a collaborative research and license agreement with Genentech and its affiliate, F. Hoffmann-La Roche Ltd, or Roche, to discover and develop selective oral inhibitors of Nav1.7 for the treatment of pain. Based on our discovery of Nav1.7 deficiency underlying CIP, we believe that Nav1.7 is a highly-validated target for the treatment of pain. Our Genentech collaboration is focused on discovering and developing selective oral Nav1.7 inhibitors, which is in contrast to our Teva partnership that is focused on developing a topical drug that targets a number of different sodium channels, including Nav1.7. The first small-molecule, preclinical product candidate that was selected for development under our collaboration is GDC-0276. In September 2014, Genentech initiated a Phase 1 clinical trial for GDC-0276.

Under the terms of the agreement, Genentech paid us an upfront fee of $10.0 million, a $5.0 million milestone payment for the selection of GDC-0276 for development and an $8.0 million milestone payment upon the approval by Health Canada of the Clinical Trial Application, or CTA, for GDC-0276. We are also eligible to receive pre-commercial and commercial milestone payments with respect to the licensed products totaling up to an additional $613.0 million, comprised of up to $45.5 million in preclinical and clinical milestone payments, up to $387.5 million in regulatory milestone payments, and up to $180.0 million in sales-based milestone payments for multiple products and indications. In addition, we are also eligible to receive royalties based on net sales of the licensed products, which range from a mid single-digit percentage to ten percent for small-molecule inhibitors for the timeframe that such products are covered by the licensed patents and a low single-digit percentage thereafter, plus a low single-digit percentage for large-molecule inhibitors of Nav1.7.

Chronic pain conditions, such as severe cancer pain and neuropathic pain, are generally recognized as unmet medical needs providing potential commercial opportunities for a new oral pain drug. Currently available pain drugs often have either a lack of meaningful pain relief or dose-limiting side effects for many patients. An orally administered selective Nav1.7 inhibitor could present a novel mechanism for the treatment of moderate to severe pain as a single agent or in combination with existing analgesics that work through different mechanisms.

Xenon's Proprietary Preclinical Product Candidates

We are leveraging our core expertise in the genetics of rare diseases and ion channel disorders to identify novel targets and discover differentiated, proprietary product candidates. We are focusing on orphan and niche disease product candidates which we believe we can develop and commercialize independently. We expect our independent development to expand the therapeutic and commercial value of our proprietary pipeline and advance our goals of building a self-sustaining, fully-integrated and profitable company.

Selective Small-Molecule Sodium Channel Inhibitors for the Treatment of Dravet Syndrome

We are developing selective inhibitors of the voltage-gated sodium channel Nav1.6 as a treatment for the orphan disease Dravet Syndrome, or DS. We have developed considerable expertise in voltage-gated sodium channel biology and have accumulated significant experience in the development of selective channel inhibitors. We are leveraging this expertise and chemistry know-how for the development of selective inhibitors of Nav1.6 for the treatment of DS.

DS is a severe form of childhood epilepsy that typically causes mental retardation and, in approximately 10% of cases, premature death before the age of 12 years. The frequency of DS in the U.S. has been estimated to be one in 20,000 to 40,000 births, which, when applied to U.S. federal census data, correlates to approximately 7,500 to 15,000 patients with DS in the U.S.

Based on our experience and know-how in developing selective ion channel inhibitors, we have identified potent, selective Nav1.6 inhibitors. We have demonstrated efficacy for seizures in an animal model with such an inhibitor. We anticipate filing an IND for a drug candidate to treat DS in 2016. Given the orphan nature of this disorder, we believe that DS may represent an attractive opportunity for us to advance independently.

XEN801 for the Treatment of Acne

XEN801 is a selective, small molecule inhibitor of stearoyl Co-A desaturase, or SCD1, being developed for the treatment of moderate to severe acne. SCD1 is an enzyme involved in lipid synthesis that is expressed in sebaceous glands in the skin. Mice deficient in SCD1 have a marked phenotype of sebaceous gland atrophy suggesting that inhibition of SCD1 activity in the skin may provide a novel treatment option for disorders of enlarged or overactive sebaceous glands, including acne. We have discovered and developed novel small-molecule SCD1 inhibitors to which we have sole rights. In multiple animal models, we have shown that our SCD1 inhibitors can reduce the size and number of sebaceous glands. XEN801 has demonstrated good properties for topical administration, including formulation in a light gel and adequate skin penetration in multiple animal species.

We anticipate selecting a development candidate for IND-enabling studies in the second half of 2014, filing an IND to initiate a Phase 1 trial in the first half of 2015 and initiating a proof-of-concept Phase 2 trial in the second half of 2015. We believe a selective, small-molecule inhibitor of SCD1 has therapeutic potential for skin disorders such as moderate to severe acne, seborrhoea and sebaceous hyperplasia.

Selective Small-Molecule Inhibitors of Targets for the Treatment of Cardiovascular Disease

We entered into a collaborative research and option agreement with Merck in June 2009 to discover novel targets and compounds for the treatment of cardiovascular disease using our Extreme Genetics discovery platform. In 2012, Merck exercised its option to obtain an exclusive license to a target for the treatment of cardiovascular disease and compound inhibitors that were discovered during the research collaboration. The target, when inhibited, is predicted to provide a beneficial lipid profile with the goal of protecting from cardiovascular disease.

New Pipeline Opportunities

Given the commercial opportunity and the pharmaceutical industry's interest in the pain market, we are using our Extreme Genetics discovery platform and specialized insights into the biology of pain to identify new drug targets for this common medical problem. We formed a second collaboration with Genentech in March 2014 for pain genetics, pursuant to which we intend to focus on rare phenotypes where individuals have an inability to perceive pain or where individuals have non-precipitated spontaneous severe pain. We believe these phenotypes may unlock new key molecular regulators of pain signaling in humans, which we will seek to validate as targets for new pain drugs. For example, we are analyzing CIP families that are not explained by Nav1.7 deficiency as well as families with severe pain phenotypes, such as paroxysmal extreme pain disorder, or PEPD, inherited EM and cluster headache.

In addition to our study of rare human disorders of extreme pain or the absence of pain, we are studying other rare disorders with extreme phenotypes that we believe could yield new drug targets in disorders where high medical need exists, such as neurological disorders like essential tremor.

In addition, given our expertise in ion channel drug discovery, we are also focusing our discovery efforts on the identification of ion channel targets where we believe novel selective inhibitors might represent significant therapeutic advances with a focus on orphan indications.

Strategic Alliances

We have strategically and selectively established multiple collaborations with leading pharmaceutical companies, including uniQure, Teva, Genentech and Merck.

These collaborations have validated our discovery platform and allowed us to expand and augment our internal discovery and development capabilities and know-how while providing us with significant, non-dilutive funding as well as the potential for future milestone payments, royalty income and commercial participation.

We believe that we have successfully implemented our partnering model by leveraging collaborations to front-load our product pipeline with clinical programs in large market opportunities that are of broad strategic value to our

partners, that leverage their established therapeutic expertise and commercial focus, and that they are advancing into later stages of development. At the same time, these partnerships have provided us with the resources to independently advance our proprietary programs in orphan indications into development, and potentially commercialization. We believe that these partnerships enable us to build on our core competencies with greater focus, speed and capital efficiency than we could have achieved independently, and have positioned us to potentially reach a number of near-term value-creating milestones. For additional information regarding our collaborations, please see the section of this prospectus captioned "Business — Strategic Alliances."

Our Strategy

Our goal is to build a self-sustaining, fully-integrated and profitable company that discovers, develops and commercializes innovative therapeutics, including novel selective ion channel inhibitors, by applying our expertise in the genetics of rare human diseases.

Since our inception, we believe we have operated in a capital-efficient manner to build our capabilities and assets through phased growth, expansion and value creation. Since our last equity financing in 2006, we have funded our operations and expanded our platform, product pipeline and infrastructure through a strategy that combines the deployment of our own resources and the establishment of broadly enabling and well-structured pharmaceutical partnerships with industry leaders.

Our strategy is to:

- *Expand our pipeline and advance multiple discovery and development programs, focusing on orphan and niche disease market opportunities that we can independently develop and commercialize ourselves.*
- *Selectively establish additional partnerships enabling us to access large commercial indications while leveraging the benefits of those collaborations to expand our internal capabilities.*
- *Further leverage our discovery platform and insights into disease biology to identify novel targets and develop next-generation products.*

For additional information about our business, please see the section of this prospectus captioned "Business."

Risks Associated with Our Business

Our ability to implement our current business strategy is subject to numerous risks, as more fully described in the section entitled "Risk Factors" immediately following this prospectus summary. These risks include, among others:

- We have incurred significant losses since our inception and anticipate that we will continue to incur significant losses for the foreseeable future.
- We have not generated any royalty revenue from product sales and may never become profitable from royalty revenue.
- We will likely need to raise additional funding, which may not be available on acceptable terms, if at all.
- Our existing collaborations are important to our business, and future collaborations may also be important to us. If we are unable to maintain any of these collaborations, or if these collaborations are not successful, our business could be adversely affected.
- Clinical drug development involves a lengthy and expensive process with uncertain timelines and outcomes. If clinical trials are prolonged or delayed, we, or our collaborators, may be unable to commercialize our product candidates on a timely basis.
- The regulatory approval processes of the FDA, the European Medicines Agency, or EMA, and regulators in other jurisdictions are lengthy, time-consuming and inherently unpredictable. If we, or our collaborators, are unable to obtain timely regulatory approval for our product candidates, our business will be substantially harmed.

- We and our collaborators face substantial competition in the markets for our product candidates.
- The novelty of gene therapy products and their lack of a commercial track record may hinder market acceptance of Glybera.
- Our approach to drug discovery is unproven, and we do not know whether we will be able to develop any products of commercial value.
- We could be unsuccessful in obtaining or maintaining adequate patent protection for one or more of our products or product candidates.
- The limited patient population for orphan and niche indications may prevent us from accurately estimating the market opportunity for our product candidates or enrolling sufficient patients for our clinical trials.

For additional information about the risks we face, please see the section of this prospectus captioned “Risk Factors.”

Concurrent Private Placement

Pursuant to the terms of our common share put agreement, an affiliate of Genentech, Inc., one of our pharmaceutical partners, will purchase $5.0 million of our common shares in a separate private placement, concurrent with the completion of this offering, at a price per share equal to the initial public offering price. The sale of such shares will not be registered under the Securities Act of 1933, as amended. The closing of this offering is not conditioned upon the closing of the concurrent private placement.

Implications of Being an Emerging Growth Company

As a company with less than $1.0 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of specified reduced reporting requirements that are otherwise applicable generally to public companies. These provisions include:

- a requirement to have only two years of audited financial statements and only two years of related management’s discussion and analysis;
- an exemption from compliance with the auditor attestation requirement on the effectiveness of our internal controls over financial reporting;
- an exemption from compliance with any requirement that the Public Company Accounting Oversight Board may adopt regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements;
- reduced disclosure about our executive compensation arrangements; and
- exemptions from the requirements to obtain a non-binding advisory vote on executive compensation or a shareholder approval of any golden parachute arrangements.

Under the JOBS Act, we will remain an “emerging growth company” until the earliest of:

- the last day of the fiscal year during which we have total annual gross revenue of $1.0 billion or more;
- the last day of the fiscal year following the fifth anniversary of the effective date of the registration statement of which this prospectus forms a part;
- the date on which we have, during the previous three-year period, issued more than $1.0 billion in non-convertible debt; or
- the date on which we are deemed to be a “large accelerated filer” under the Securities Exchange Act of 1934, as amended, or the Exchange Act (we will qualify as a large accelerated filer as of the first day of the first fiscal year after we have (i) more than $700.0 million in outstanding common equity held by our non-affiliates and (ii) been public for at least 12 months; the value of our outstanding common equity will be measured each year on the last day of our second fiscal quarter).

We may choose to take advantage of some of the available benefits under the JOBS Act, and have taken advantage of some reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different than the information you receive from other U.S. public companies in which you hold stock.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to delay the adoption of some accounting standards until those standards would otherwise apply to private companies. However, we are choosing to "opt out" of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

Corporate Information

We were incorporated in the Province of British Columbia on November 5, 1996 under the predecessor to the Business Corporations Act (British Columbia) under the name "Xenon Bioresearch Inc." We continued from British Columbia to the federal jurisdiction pursuant to Section 187 of the Canada Business Corporations Act, or the CBCA, on May 17, 2000 and concurrently changed our name to "Xenon Genetics Inc." We registered as an extra-provincial company in British Columbia on July 10, 2000 and changed our name to "Xenon Pharmaceuticals Inc." on August 24, 2004. We have no subsidiaries. Our principal executive offices are located at 200 – 3650 Gilmore Way, Burnaby, British Columbia, Canada V5G 4W8, and our telephone number is (604) 484-3300. Our website address is http://www.xenon-pharma.com. We are currently not a reporting issuer, or the equivalent, in any province or territory of Canada and our shares are not listed on any recognized Canadian stock exchange but we expect to become a reporting issuer in British Columbia, Alberta and Ontario upon completion of this offering. The information contained in, or that can be accessed through, our website is not part of this prospectus.

The Xenon logo, "Extreme Genetics™" and other trademarks or service marks of Xenon appearing in this prospectus are trademarked and are the property of Xenon as is the Xenon corporate name. This prospectus contains references to our trademarks and service marks and to those belonging to other entities, including "Glybera®," which is the property of uniQure. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other entities' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

The Offering

Common shares offered by us	4,000,000 common shares
Common shares to be issued and sold by us to an affiliate of Genentech in the concurrent private placement, assuming an initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus)	454,545 shares
Common shares to be outstanding after this offering and the concurrent private placement	13,539,232 common shares (or 14,139,232 if the underwriters exercise their option to purchase additional common shares in full)
Option to purchase additional common shares	We have granted the underwriters an option for 30 days from the date of this prospectus to purchase up to 600,000 additional common shares.
Use of proceeds	We estimate that the net proceeds from this offering and the concurrent private placement will be approximately $41.3 million, or approximately $47.4 million if the underwriters exercise in full their option to purchase additional common shares, based upon an assumed initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), after deducting the estimated underwriting discounts and commissions, estimated fees payable in connection with the concurrent private placement and estimated offering expenses payable by us. We currently expect to use the net proceeds from this offering and the concurrent private placement: (1) to fund preclinical and early clinical development of our DS and XEN801 programs; (2) to fund genetic research and drug discovery activities using our Extreme Genetics discovery platform; and (3) for working capital and general corporate purposes. We may also use a portion of the net proceeds in connection with any exercise of co-development or co-promotion rights under our strategic alliances; however, no such rights are currently exercisable. In addition, we may also use a portion of the net proceeds to acquire, license and invest in complementary products, technologies or businesses; however, we currently have no agreements or commitments to complete any such transaction. See “Use of Proceeds.”

Proposed ticker symbol on The NASDAQ Global Market “XENE”

Under the terms of our collaboration agreement, Teva Pharmaceutical Industries Ltd., or Teva, one of our pharmaceutical partners, or an affiliate of Teva will purchase $10.0 million of our common shares in this offering at the initial public offering price. The underwriters will receive the same discount from any common shares purchased by Teva or its affiliate as they will from any other common shares sold to the public in this offering.

The number of common shares to be outstanding after this offering and the concurrent private placement is based on 9,084,687 common shares outstanding as of June 30, 2014 and excludes the following:

- 1,442,741 common shares issuable upon exercise of options outstanding as of June 30, 2014, with a weighted-average exercise price of CAD$4.66 per common share, or $4.37 per common share, as converted; and
- 411,522 common shares reserved for future issuance under our 2014 Equity Incentive Plan, as amended, which will become effective on the business day immediately prior to the effective date of the registration statement of which this prospectus forms a part, and any future automatic increase in common shares reserved for issuance under such plan.

Except as otherwise indicated, this prospectus:

- reflects the conversion of all outstanding preferred shares into an aggregate of 7,725,924 common shares upon the closing of this offering, including the conversion of all of our outstanding Series A preferred shares and Series B preferred shares into 2,146,353 common shares and the conversion of all of our outstanding Series E preferred shares into 5,579,571 common shares, based upon an assumed initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) and the adjustment provisions relating to our Series E preferred shares described in “Description of Share Capital;”
- reflects the automatic conversion of 10,660 subscription rights into the same number of common shares immediately prior to the closing of this offering;
- assumes the filing of certain amendments to our articles of continuance prior to the closing of this offering;
- assumes no exercise by the underwriters of their option to purchase additional common shares;
- reflects the issuance and sale by us of 454,545 common shares in the concurrent private placement to an affiliate of Genentech, based upon an assumed initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus);
- reflects a 1 for 4.86 reverse share split of our common and preferred shares effected on October 1, 2014; and
- with respect to financial measures, is presented in accordance with U.S. generally accepted accounting principles, or U.S. GAAP.

Summary Financial Data

We have derived the following summary of statements of operations data for the years ended December 31, 2011, 2012 and 2013 from audited financial statements appearing elsewhere in this prospectus. We derived the following statements of operations data for the six months ended June 30, 2013 and 2014 and the balance sheet data as of June 30, 2014 from unaudited interim financial statements included elsewhere in this prospectus. In the opinion of management, the unaudited interim financial statements reflect all adjustments, which include only normal recurring adjustments, necessary for a fair presentation of the financial statements. Historical results are not necessarily indicative of the results that may be expected in the future and the results for the six months ended June 30, 2014 are not necessarily indicative of the results that may be expected for the full year or any other period. The summary financial data set forth below should be read together with the financial statements and the related notes to those statements, as well as the sections of this prospectus captioned "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." Our audited annual financial statements and unaudited interim financial statements have been prepared in accordance with U.S. GAAP.

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	2011	2012	2013	2013	2014
				(unaudited)	
	(in thousands, except per share data)				
Statement of Operations Data:					
Revenue:					
Collaboration revenue	$ 6,915	$ 14,300	$ 27,352	$ 10,985	$ 10,297
Royalties	3	8	4	—	2
	6,918	14,308	27,356	10,985	10,299
Operating expenses:					
Research and development	12,302	10,455	12,303	6,983	5,099
General and administrative	6,730	7,006	5,341	2,828	2,790
Total operating expenses	19,032	17,461	17,644	9,811	7,889
Income (loss) from operations	(12,114)	(3,153)	9,712	1,174	2,410
Other income (expense):					
Interest income	153	144	338	76	278
Interest expense	(91)	(93)	(64)	(41)	—
Foreign exchange gain (loss)	60	(169)	2,035	1,920	(85)
Gain (loss) on write-off and disposal of assets	—	(1,030)	11	11	—
Net income (loss)	(11,992)	(4,301)	12,032	3,140	2,603
Net income (loss) attributable to participating securities	—	—	8,199	3,140	2,603
Net income (loss) attributable to common shareholders	$ (11,992)	$ (4,301)	$ 3,833	$ —	$ —
Net income (loss) per share—basic	$ (9.06)	$ (3.24)	$ 2.87	$ 0.00	$ 0.00
Net income (loss) per share—diluted	$ (9.06)	$ (3.24)	$ 1.91	$ 0.00	$ 0.00
Weighted-average common shares outstanding used in computing basic net income (loss) per share	1,324	1,327	1,338	1,333	1,347
Weighted-average common shares outstanding used in computing diluted net income (loss) per share	1,324	1,327	2,009	1,333	1,347
Pro forma net income per share—basic[(1)]			$ 1.33		$ 0.29
Pro forma net income per share—diluted[(1)]			$ 1.24		$ 0.26
Weighted-average common shares outstanding used in computing the proforma net income per share—basic [(1)]			9,076		9,085
Weighted-average common shares outstanding used in computing the proforma net income per share—diluted [(1)]			9,735		9,828

	AS OF JUNE 30, 2014	
	ACTUAL	PRO FORMA AS ADJUSTED[2]
	(unaudited) (in thousands)	
Balance Sheet Data:		
Cash, cash equivalents and marketable securities	$ 44,710	$ 85,980
Working capital	27,977	69,247
Total assets	50,712	91,982
Redeemable convertible preferred shares	102,488	—
Total shareholders' deficit	(75,382)	68,376

(1) Pro forma net income (loss) per share represents net income (loss) divided by the pro forma weighted-average shares outstanding, and reflects (i) the conversion of all outstanding preferred shares into an aggregate of 7,725,924 common shares, including the conversion of all of our outstanding Series A preferred shares and Series B preferred shares into 2,146,353 common shares and the conversion of all of our outstanding Series E preferred shares into 5,579,571 common shares, based upon an assumed initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) and the adjustment provisions relating to our Series E preferred shares described in "Description of Share Capital," upon the closing of this offering, and (ii) the conversion of the weighted-average number of outstanding subscription rights for the period into common shares.

(2) Reflects, on a pro forma basis, (i) the automatic conversion described in footnote (1) and, on an as adjusted basis, (ii) the issuance and sale by us of $5.0 million of our common shares in the concurrent private placement to an affiliate of Genentech, after deducting estimated fees payable in connection with the concurrent private placement, and (iii) the sale and issuance by us of 4,000,000 common shares hereunder at an assumed initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each $1.00 increase (decrease) in the assumed initial public offering price of $11.00 per share, would increase (decrease) each of cash, cash equivalents and marketable securities, working capital, total assets and total shareholders' deficit by approximately $3.7 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 500,000 common shares in the number of shares offered by us would increase (decrease) each of cash, cash equivalents and marketable securities, working capital, total assets and total shareholders' deficit by approximately $5.1 million, assuming that the assumed initial public offering price remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will adjust based on the actual initial public offering price and other terms of this offering determined at pricing.

RISK FACTORS

Investing in our common shares involves a high degree of risk. You should carefully consider the risks and uncertainties described below together with all of the other information contained in this prospectus, including our financial statements and the related notes appearing at the end of this prospectus and "Management's Discussion and Analysis of Financial Condition and Results of Operations," before deciding whether to invest in our common shares. If any of the following risks actually occur, our business, growth prospects, operating results and financial condition could suffer materially, the trading price of our common shares could decline and you could lose all or part of your investment.

Risks Related to Our Financial Condition and Capital Requirements

We have incurred significant losses since our inception and anticipate that we will continue to incur significant losses for the foreseeable future.

We are a clinical-stage biotechnology company and, other than the year ended December 31, 2013 and the six months ended June 30, 2014, we have recorded net losses in each reporting period since inception in 1996, and we do not expect to have sustained profitability for the foreseeable future. We had net losses of $12.0 million and $4.3 million for the years ended December 31, 2011 and 2012, respectively, and had an accumulated deficit of $114.1 million as of June 30, 2014.

We have devoted most of our financial resources to research and development, including our clinical and preclinical development activities. To date, we have financed our operations through the sale of equity securities and funding received from our licensees and collaborators. We have not generated any royalty revenue from product sales and our product candidates will require substantial additional investment before they will provide us with any product royalty revenue.

We expect to incur significant expenses and increasing operating losses for the foreseeable future as we:

- continue our research and preclinical and clinical development of our product candidates;
- expand the scope of our clinical studies for our current and prospective product candidates;
- initiate additional preclinical, clinical or other studies for our product candidates, including under our collaboration agreements;
- change or add additional manufacturers or suppliers;
- seek regulatory and marketing approvals for any of our product candidates that successfully complete clinical studies;
- seek to identify and validate additional product candidates;
- acquire or in-license other product candidates and technologies;
- make milestone or other payments under our in-license agreements including, without limitation, our agreements with the University of British Columbia, or UBC, and the Memorial University of Newfoundland;
- maintain, protect and expand our intellectual property portfolio;
- establish a sales, marketing and distribution infrastructure to commercialize any products for which we or one of our collaborators may obtain marketing approval, and for which we have maintained commercial rights;
- create additional infrastructure to support our operations as a public company and our product development and planned future commercialization efforts; and
- experience any delays or encounter issues with any of the above.

Our expenses could increase beyond expectations for a variety of reasons, including if we are required by the U.S. Food and Drug Administration, or FDA, the European Medicines Agency, or EMA, or other regulatory agencies, domestic or foreign, to perform clinical and other studies in addition to those that we currently anticipate. Our prior losses, combined with expected future losses, have had and will continue to have an adverse effect on our shareholders' equity.

We have not generated any royalty revenue from product sales and may never become profitable on a U.S. GAAP basis.

Our ability to generate meaningful revenue and achieve profitability on a U.S. GAAP basis depends on our ability, alone or with strategic collaborators, to successfully complete the development of, and obtain the regulatory

approvals necessary to commercialize, our product candidates. Substantially all of our revenue since inception has consisted of upfront and milestone payments associated with our collaboration and license agreements. Revenue from these agreements is dependent on successful development of our product candidates by us or our collaborators. To date, we have not generated any royalty revenue from product sales, and do not otherwise anticipate generating revenue from product sales other than from sales of Glybera under our license to uniQure Biopharma B.V., or uniQure, for the foreseeable future, if ever. If any of our product candidates fail in clinical trials or do not gain regulatory approval, or if Glybera or any of our future products, if any, once approved, fails to achieve market acceptance or adequate market share, we may never become profitable. Although we were profitable for the year ended December 31, 2013 and the six months ended June 30, 2014, we may not be able to sustain profitability in subsequent periods. Our ability to generate future revenue from product sales depends heavily on our success, and the success of our collaborators, in:

- completing research, preclinical and clinical development of our product candidates;
- seeking and obtaining regulatory and marketing approvals for product candidates for which we complete clinical studies;
- commercializing products for which we obtain regulatory and marketing approval, either with a collaborator or, if launched independently, by establishing sales, marketing and distribution infrastructure;
- negotiating favorable terms in any collaboration, licensing or other arrangements into which we may enter;
- obtaining market acceptance of products for which we obtain regulatory and marketing approval as therapies;
- addressing any competing technological and market developments;
- establishing and maintaining supply and manufacturing relationships with third parties that can provide adequate (in amount and quality) products and services to support clinical development and the market demand for any approved products in the future;
- developing a sustainable, scalable, reproducible, and transferable manufacturing processes for any of our products approved in the future;
- maintaining, protecting, expanding and enforcing our portfolio of intellectual property rights, including patents, trade secrets and know-how;
- implementing additional internal systems and infrastructure, as needed; and
- attracting, hiring and retaining qualified personnel.

The scope of our future revenue will also depend upon the size of any markets in which our product candidates receive approval and the availability of insurance coverage and the availability and amount of reimbursement from third-party payers for Glybera and future products, if any. If we are unable to achieve sufficient revenue to become profitable and remain so, our financial condition and operating results will be negatively impacted, and our trading price might be harmed.

Even if this offering is successful, we will likely need to raise additional funding, which may not be available on acceptable terms, if at all. Failure to obtain this necessary capital when needed may force us to delay, limit or terminate our product development efforts or other operations.

Since our inception, we have dedicated most of our resources to the discovery and development of our proprietary preclinical and clinical product candidates, and we expect to continue to expend substantial resources doing so for the foreseeable future. These expenditures will include costs associated with research and development, manufacturing of product candidates and products approved for sale, conducting preclinical experiments and clinical trials and obtaining and maintaining regulatory approvals, as well as commercializing any products later approved for sale. During the six months ended June 30, 2014, we incurred approximately $5.1 million of costs associated with research and development, exclusive of costs incurred by our collaborators in developing our current product and product candidates.

The anticipated net proceeds from this offering and the concurrent private placement are not expected to be sufficient to complete clinical development of any of our product candidates and prepare for commercializing any product candidate which receives regulatory approval. Accordingly, we will likely require substantial additional capital beyond the expected proceeds of this offering to continue our clinical development and potential commercialization activities. Our future capital requirements depend on many factors, including but not limited to:

- the number and characteristics of the future product candidates we pursue;
- the scope, progress, results and costs of independently researching and developing any of our future product candidates, and conducting preclinical research and clinical trials;
- whether our existing collaborations continue to generate substantial milestone payments and, ultimately, royalties on future products for us;
- the timing of, and the costs involved in, obtaining regulatory approvals for any future product candidates we develop independently;
- the cost of future commercialization activities, including activities required pursuant to our option to co-promote TV-45070, if exercised by us, and the cost of commercializing any future products we develop independently that are approved for sale;
- the cost of manufacturing our future products, if any;
- our ability to maintain existing collaborations and to establish new collaborations, licensing or other arrangements and the financial terms of such agreements;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patents, including litigation costs and the outcome of such litigation; and
- the timing, receipt and amount of sales of, or royalties on, Glybera, and our future products, if any.

We are unable to estimate the funds we will actually require to complete research and development of our product candidates or the funds required to commercialize any resulting product in the future.

Upon the completion of this offering and the concurrent private placement, based upon our anticipated operating expenditures, we expect that the net proceeds from this offering and the concurrent private placement, research funding that we expect to receive under our existing collaborations and our existing cash, cash equivalents and marketable securities will be sufficient to fund our current operations for at least the next 12 to 24 months. However, our operating plan may change as a result of many factors currently unknown to us, and we may need to seek additional funds sooner than planned, through public or private equity or debt financings, government or other third-party funding, marketing and distribution arrangements and other collaborations, strategic alliances and licensing arrangements or a combination of these approaches. Raising funds in the future may present additional challenges and future financing may not be available in sufficient amounts or on terms acceptable to us, if at all.

Raising additional capital may cause dilution to our existing shareholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.

The terms of any financing arrangements we enter into may adversely affect the holdings or the rights of our shareholders and the issuance of additional securities, whether equity or debt, by us, or the possibility of such issuance, may cause the market price of our shares to decline. The sale of additional equity or convertible securities would dilute all of our shareholders. The incurrence of indebtedness would result in increased fixed payment obligations and, potentially, the imposition of restrictive covenants. Those covenants may include limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. We could also be required to seek funds through arrangements with collaborators or otherwise at an earlier stage than otherwise would be desirable resulting in the loss of rights to some of our product candidates or other unfavorable terms, any of which may have a material adverse effect on our business, operating results and prospects. In addition, any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates.

Unstable market and economic conditions may have serious adverse consequences on our business and financial condition.

Global credit and financial markets experienced extreme disruptions at various points over the last decade, characterized by diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic stability. If another such disruption in credit and financial markets and deterioration of confidence in economic conditions occurs, our business may be adversely affected. If the equity and credit markets were to deteriorate significantly in the future, it may make any necessary debt or equity financing more difficult to complete, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and share price and could require us to delay or abandon development or commercialization plans. In addition, there is a risk that one or more of our current collaborators, service providers, manufacturers and other partners would not survive or be able to meet their commitments to us under such circumstances, which could directly affect our ability to attain our operating goals on schedule and on budget.

We are subject to risks associated with currency fluctuations, and changes in foreign currency exchange rates could impact our results of operations.

As of June 30, 2014, approximately 19% of our cash and cash equivalents was denominated in U.S. dollars. Historically, a portion of our operating expenses and a substantial portion of our revenue has been denominated in U.S. dollars. Because our functional currency is the Canadian dollar, changes in the exchange rate between the Canadian dollar and the U.S. dollar could materially impact our reported results of operations and distort period to period comparisons. In particular, because of the difference in the amount of our revenue and expenses that are in U.S. dollars relative to Canadian dollars, depreciation in the U.S. dollar relative to the Canadian dollar could result in a material increase in reported expenses relative to revenue, and therefore could cause our operating income (expense) to appear to decline materially, particularly relative to prior periods. The converse is true if the U.S. dollar were to appreciate relative to the Canadian dollar. Fluctuations in foreign currency exchange rates also impact the reporting of our receivables and payables in non-Canadian currencies. Translation gains or losses related to the translation of our net assets from our Canadian functional currency into the U.S. reporting currency are included as a component of accumulated comprehensive income on our balance sheet. As a result of such foreign currency fluctuations, it could be more difficult to detect underlying trends in our business and results of operations. In addition, to the extent that fluctuations in currency exchange rates cause our results of operations to differ from our expectations or the expectations of our investors, the trading price of our common shares could be adversely affected.

From time to time, we may engage in exchange rate hedging activities in an effort to mitigate the impact of exchange rate fluctuations. For example, we maintain a natural currency hedge against fluctuations in the U.S./Canadian foreign exchange rate by matching the amount of U.S. dollar and Canadian dollar investments to the expected amount of future U.S. dollar and Canadian dollar obligations, respectively. Any hedging technique we implement may fail to be effective. If our hedging activities are not effective, changes in currency exchange rates may have a more significant impact on the trading price of our common shares.

Risks Related to Our Business

We, or our collaborators, may fail to successfully develop our product candidates.

Our product candidates, including TV-45070 and GDC-0276 and compounds in our preclinical and discovery pipeline, are in varying stages of development and will require substantial clinical development, testing and regulatory approval prior to commercialization. It may be several more years before these product candidates or any of our other product candidates receive marketing approval, if ever. If any of our product candidates fail to become approved products, our business, growth prospects, operating results and financial condition may be adversely affected and a decline of our common share price could result. For example, in June 2013, we paid Isis Pharmaceuticals, Inc., or Isis, an option exercise fee of $2.0 million to obtain an exclusive license to develop, manufacture and commercialize antisense products under our collaboration and license agreement with Isis; however, in the fourth quarter of 2013, we discontinued development of product candidates under this program as the preclinical data did not support the continued advancement of any product candidates.

Our near-term operating revenue is partially dependent upon the regulatory and marketing efforts of uniQure, or its sublicensee, for the development and commercialization of Glybera.

Under the terms of our license agreement with uniQure, we rely on uniQure, or its sublicensees, to market Glybera and to obtain regulatory approval of Glybera. In July 2013, uniQure announced that it had granted to Chiesi Farmaceutici, S.p.A., or Chiesi, an Italian pharmaceutical firm, an exclusive license to commercialize Glybera in the European Union, or the EU, and certain other countries outside of North America and Japan. Despite the efforts of uniQure and Chiesi, Glybera may not gain market acceptance among physicians, patients, healthcare payers and the medical community. The commercial success of Glybera will depend on a number of factors, including:

- establishment and demonstration of clinical efficacy and safety and acceptance of the same by the medical community;
- commercialization of competing products;
- sufficient commercial supply of Glybera;
- cost-effectiveness of Glybera;
- the availability of coverage and adequate reimbursement from third parties, including governmental payers, managed care organizations, and private health insurers;
- the relative cost, safety and efficacy of therapies that exist now or may be developed in the future;
- whether the product can be manufactured in commercial quantities at acceptable cost;
- marketing and distribution support for Glybera;
- the effect of current and future healthcare laws;
- the acceptance of gene therapies as a class of treatment; and
- any market or regulatory exclusivities applicable to the product.

To date, the FDA has never approved any gene therapy product as a treatment for any indication in the U.S. and the FDA may never approve Glybera. Any failure of uniQure or its sublicensee to successfully commercialize Glybera could have a material adverse effect on our business, growth prospects, operating results and financial condition and could result in a substantial decline in the price of our common shares.

We and our collaborators face substantial competition in the markets for our product candidates, which may result in others discovering, developing or commercializing products before us or doing so more successfully than we or our collaborators do.

The biotechnology and pharmaceutical industries are characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. We face potential competition in target discovery and product development from many different approaches and sources, including major pharmaceutical, specialty pharmaceutical and biotechnology companies, academic institutions and governmental agencies and public and private research institutions. Any product candidates that we or our collaborators successfully develop and commercialize will compete with existing products and any new products that may become available in the future.

The key competitive factors affecting the success of all of our product candidates, if approved, are likely to be their efficacy, safety, convenience and price; the effectiveness of alternative products; the level of generic competition; and the availability of coverage and adequate reimbursement from government and other third-party payors.

With respect to target discovery activities, competitors and other third parties, including academic and clinical researchers, may access rare families and identify novel targets for drug development before we do.

Many of the companies against which we are competing or against which we may compete in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we, or our collaborators, do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early stage companies may also prove to be significant competitors, particularly through collaboration arrangements with large and established companies.

Our commercial opportunities could be reduced or eliminated if our competitors develop and commercialize products or therapies that are safer, more effective, have fewer or less severe side effects, are more convenient or are less

expensive than any products that we may develop. Our competitors also may obtain FDA, EMA or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected by decisions made by insurers or other third party payors.

To the extent that we are unable to compete effectively against one or more of our competitors in these areas, our business will not grow and our financial condition, results of operations and common share price may suffer.

There are no approved gene therapies currently on the market for lipoprotein lipase deficiency, or LPLD, in the U.S. The current management of LPLD consists of strict adherence to an extremely low-fat diet, but compliance with such a diet is challenging. Lipid-lowering drugs are generally not effective for treating LPLD. We are not aware of any other drugs or therapies currently in development that treat LPLD by using the lipoprotein lipase, or LPL, sequence containing the LPL^{S447X} genetic variant or otherwise.

Drug discovery and development for various pain applications is intensely competitive. There are a large number of approved products for neuropathic pain, inflammatory pain and other pain indications. These approved products include capsaicin, celecoxib, lidocaine, narcotic analgesics and pregabalin. We are also aware of clinical-stage development programs at several pharmaceutical and biotechnology companies that are targeting Nav1.7 inhibitors to develop products to treat various pain indications, including Bioline Rx Ltd., Convergence Pharmaceuticals Limited, Dainippon Sumitomo Co., Ltd. and Pfizer, Inc. Moreover, we are aware of various other product candidates in development that target other mechanisms of action to treat various pain indications. We are not aware of any drugs or therapies currently approved specifically for treating primary erythromelalgia, or EM.

The novelty of gene therapy products and their lack of a commercial track record may hinder market acceptance of Glybera among physicians, patients, healthcare payers and the medical community.

Glybera is the first gene therapy product approved in the EU and no gene therapy product has been approved in the U.S. Because Glybera is likely to be the first gene therapy to be marketed in the EU, gaining market acceptance and overcoming any safety or efficacy concerns may be more challenging than for a more traditional therapy. Glybera's commercial success will depend, in part, on the success of efforts to educate the market regarding gene therapy products. In particular, the success of Glybera will depend upon physicians who treat patients with LPLD, prescribing Glybera. With respect to Glybera and any other gene therapy products we or a collaborator may develop, public perception may be influenced by claims that gene therapy is unsafe, and, if so, gene therapy may not gain the acceptance of the public or the medical community. More restrictive government regulations or negative public opinion could have a negative effect on our business or financial condition and may delay or impair the commercialization of Glybera. If Glybera is not successfully commercialized, our ability to generate near term revenue could be impaired.

We have no marketed products and have not yet advanced a product candidate beyond Phase 2 clinical trials, which makes it difficult to assess our ability to develop our future product candidates and commercialize any resulting products independently.

We have no experience in Phase 3 and later stage clinical development, and related regulatory requirements or the commercialization of products. uniQure controls and has been responsible for the development and commercialization of Glybera, Teva Pharmaceutical Industries Ltd., or Teva, is responsible for the on-going clinical development of TV-45070, and Genentech Inc., or Genentech, is responsible for the ongoing clinical development of GDC-0276. Accordingly, we have not yet demonstrated our ability to independently and repeatedly conduct clinical development after Phase 2, obtain regulatory approval and commercialize therapeutic products. We will need to develop such abilities if we are to execute on our business strategy to selectively develop and independently commercialize product candidates for orphan and niche indications. To execute on our business plan for the development of independent programs, we will need to successfully:

- execute our clinical development plans for later-stage product candidates;
- obtain required regulatory approvals in each jurisdiction in which we will seek to commercialize products;
- build and maintain appropriate sales, distribution and marketing capabilities;
- gain market acceptance for our future products, if any; and
- manage our spending as costs and expenses increase due to clinical trials, regulatory approvals and commercialization activities.

If we are unsuccessful in accomplishing these objectives, we would not be able to develop and commercialize any future orphan and niche disease product candidates independently, and could fail to realize the potential advantages of doing so.

If we are not successful in leveraging our Extreme Genetics discovery platform to discover product candidates in addition to TV-45070 and GDC-0276, our ability to expand our business and achieve our strategic objectives may be impaired.

We rely on our Extreme Genetics discovery platform to identify validated drug targets and develop new product candidates. To date, our Extreme Genetics discovery platform has yielded one approved product, Glybera, and our announced development candidates TV-45070 and GDC-0276. Use of our discovery platform requires substantial technical, financial and human resources, regardless of whether we identify any novel drug targets. Our Extreme Genetics discovery platform may initially show promise in identifying additional potential product candidates, yet fail to yield viable product candidates for clinical development or commercialization. Such failure may occur for many reasons, including the following: any product candidate may, on further study, be shown to have serious or unexpected side effects or other characteristics that indicate it is unlikely to be safe or otherwise does not meet applicable regulatory criteria; and any product candidate may not be capable of being produced in commercial quantities at an acceptable cost, or at all.

If we are unable to identify additional product candidates suitable for clinical development and commercialization, we may not be able to obtain product revenue in future periods, which likely would result in significant harm to our financial position and adversely impact our trading price.

Our approach to drug discovery is unproven, and we do not know whether we will be able to develop any products of commercial value.

Our Extreme Genetics discovery platform may not reproducibly or cost-effectively result in the discovery of product candidates and development of commercially viable products that safely and effectively treat human disease.

There are various challenges in utilizing our Extreme Genetics discovery platform to successfully identify novel drug targets, including locating families suffering from rare disorders and severe phenotypes, entering into agreements with foreign collaborators, complying with various domestic and foreign privacy laws, accessing required technologies in a timely manner and transporting DNA across national borders.

To date, only Glybera has been both developed using our Extreme Genetics discovery platform and approved for commercial sale. If the use of our Extreme Genetics discovery platform fails to identify novel targets for drug discovery, or such targets prove to be unsuitable for treating human disease, or we are unable to develop product candidates with specificity and selectivity for such targets, we will fail to develop viable products. If we fail to develop and commercialize viable products, we will not achieve commercial success.

We may encounter difficulties in managing our growth, including headcount, and expanding our operations successfully.

Our business strategy involves continued development and, where development is successful, commercialization of select successfully developed product candidates for orphan and niche indications independently. In order to execute on this strategy, we will need to build out a regulatory, sales, manufacturing, distribution and marketing infrastructure and expand our development capabilities or contract with third parties to provide these capabilities and infrastructure for us. To achieve this, we will need to identify, hire and integrate personnel who have not worked together as a group previously. We anticipate that we may need to hire additional accounting, legal and financial staff with appropriate public company experience and technical accounting and other knowledge to address the added burdens of operating as a public company. There are likely to be infrastructure costs associated with public company compliance as well.

As our operations expand, we expect that we will need to manage additional relationships with various strategic collaborators, suppliers and other third parties.

Dr. Gary Bridger, our Executive Vice President of Research and Development, works for us on a part-time, one-day-a-week basis, pursuant to a consulting agreement. Drs. Simon Pimstone and Y. Paul Goldberg each devote a small amount of their time to clinical work outside of their duties at our company, conducting, generally, two to three outpatient clinics per month. Future growth will impose significant added responsibilities on members of

management, and our management may need to divert a disproportionate amount of its attention away from our day-to-day activities and devote a substantial amount of time to managing these growth activities.

If we are to effectively manage our growth, our expenses may increase more than expected, our ability to generate and grow revenue could be reduced, and we may not be able to implement our business strategy. Our future financial performance and our ability to commercialize product candidates and compete effectively will depend, in part, on our ability to effectively manage any future growth.

If we fail to attract and retain senior management and key personnel, we may be unable to successfully develop our product candidates, perform our obligations under our collaboration agreements, conduct our clinical trials and commercialize our product candidates.

Our success depends in part on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel.

We could experience difficulties attracting and retaining qualified employees as competition for qualified personnel in the biotechnology and pharmaceutical field is intense. We are highly dependent upon our senior management, particularly Dr. Pimstone, our Chief Executive Officer and President; Mr. Ian Mortimer, our Chief Financial Officer; and Dr. Goldberg, our Vice President, Clinical Development, as well as other employees. In the near future, the loss of services of any of these individuals or one or more of our other members of senior management could materially delay or even prevent the successful development of our product candidates.

In addition, we will need to hire additional personnel as we expand our clinical development activities and develop commercial capabilities, including a sales infrastructure to support our independent commercialization efforts. We may not be able to attract and retain personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for individuals with similar skill sets. The inability to recruit or loss of the services of any executive or key employee may impede the progress of our research, development and commercialization objectives.

Our employees, collaborators and other personnel may engage in misconduct or other improper activities, including non-compliance with regulatory standards and requirements and insider trading.

We are exposed to the risk of fraud or other misconduct by our employees, collaborators, vendors, principal investigators, consultants and commercial partners. Misconduct by these parties could include intentional failures to comply with the regulations of the FDA, EMA and other non-U.S. regulators, provide accurate information to the FDA, EMA and other non-U.S. regulators, comply with data privacy and security and healthcare fraud and abuse laws and regulations in the U.S. and abroad, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. Additionally, laws regarding data privacy and security, including the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, as well as comparable laws in non-U.S. jurisdictions, may impose obligations with respect to safeguarding the privacy, use, security and transmission of individually identifiable health information such as genetic material.

Various laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Any misconduct could also involve the improper use of information obtained in the course of clinical studies, which could result in regulatory sanctions and cause serious harm to our reputation. We have adopted a code of conduct applicable to all of our employees, which will be effective as of the effectiveness of the registration statement of which this prospectus forms a part, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant fines or other sanctions.

A variety of risks associated with international operations could materially adversely affect our business.

Glybera has been approved for commercial sale in the EU by the EMA. Our collaborator for TV-45070, Teva, is based in Israel and a significant portion of the research and development activities under our collaboration with Teva are performed outside of North America. If we continue to engage in significant cross-border activities, we will be subject to risks related to international operations, including:

- different regulatory requirements for maintaining approval of drugs and biologics in foreign countries;
- reduced protection for intellectual property rights in certain countries;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation, political instability or open conflict in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- workforce uncertainty in countries where labor unrest is more common than in North America;
- tighter restrictions on privacy and the collection and use of data, including genetic material, may apply in jurisdictions outside of North America, where we find some of the families with individuals that exhibit the severe phenotypes that we study; and
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires.

If any of these issues were to occur, our business could be materially harmed.

U.S. Holders of our shares may suffer adverse tax consequences if we are characterized as a passive foreign investment company.

Generally, for any taxable year in which 75% or more of our gross income is passive income, or at least 50% of the average quarterly value of our assets (which may be determined in part by the market value of our common shares, which is subject to change) are held for the production of, or produce, passive income, we would be characterized as a passive foreign investment company, or PFIC, for U.S. federal income tax purposes. Based on the composition of our gross income and gross assets and the nature of our business, we do not believe that we were a PFIC for the taxable year ended December 31, 2013 and we do not expect to be a PFIC following this offering and for the taxable year ending December 31, 2014.

If we are a PFIC for 2014 or any subsequent year, U.S. Holders (as defined in “United States & Canadian Income Tax Considerations—U.S. Federal Income Tax Information for U.S. Holders”) of our common shares may suffer adverse tax consequences. Gains realized by non-corporate U.S. Holders on the sale of our common shares would be taxed as ordinary income, rather than as capital gain, and the preferential tax rate applicable to dividends received on our common shares would be lost. Interest charges would also be added to taxes on gains and dividends realized by all U.S. Holders.

A U.S. Holder may avoid these adverse tax consequences by timely making a qualified electing fund election. For each year that we would meet the PFIC gross income or asset test, an electing U.S. Holder would be required to include in gross income its pro rata share of our net ordinary income and net capital gains, if any. A U.S. Holder may make a qualified electing fund election only if we commit to provide U.S. Holders with their pro rata share of our net ordinary income and net capital gains. If we are a PFIC in the current or a future tax year, we will provide our U.S. Holders with the information that is necessary in order for them to make a qualified electing fund election and to report their common shares of ordinary earnings and net capital gains for each year for which we are a PFIC.

A U.S. Holder may also mitigate the adverse tax consequences if we are a PFIC by timely making a mark-to-market election. Generally, for each year that we would meet the PFIC gross income or asset test, an electing U.S. Holder would include in gross income the increase in the value of its shares during each of its taxable years and deduct from gross income the decrease in the value of such shares during each of its taxable years. A mark-to-market election may be made and maintained only if our common shares are regularly traded on a qualified exchange, including The NASDAQ Global Market, or NASDAQ. Whether our common shares are regularly traded on a qualified

exchange is an annual determination based on facts that, in part, are beyond our control. Accordingly, a U.S. Holder might not be eligible to make a mark-to-market election to mitigate the adverse tax consequences if we are characterized as a PFIC. See “United States and Canadian Income Tax Considerations—U.S. Federal Income Tax Information for U.S. Holders—Passive Foreign Investment Company Consequences.”

Acquisitions or joint ventures could disrupt our business, cause dilution to our shareholders and otherwise harm our business.

We actively evaluate various strategic transactions on an ongoing basis and may acquire other businesses, products or technologies as well as pursue strategic alliances, joint ventures or investments in complementary businesses. Any of these transactions could be material to our financial condition and operating results and expose us to many risks, including:

- disruption in our relationships with collaborators or suppliers as a result of such a transaction;
- unanticipated liabilities related to acquired companies;
- difficulties integrating acquired personnel, technologies and operations into our existing business;
- retention of key employees;
- diversion of management time and focus from operating our business to management of strategic alliances or joint ventures or acquisition integration challenges;
- increases in our expenses and reductions in our cash available for operations and other uses; and
- possible write-offs or impairment charges relating to acquired businesses.

Foreign acquisitions involve unique risks in addition to those mentioned above, including those related to integration of operations across different cultures and languages, currency risks and the particular economic, political and regulatory risks associated with specific countries.

Also, the anticipated benefit of any strategic alliance, joint venture or acquisition may not materialize. Future acquisitions or dispositions could result in potentially dilutive issuances of our equity securities, the incurrence of debt, contingent liabilities or amortization expenses or write-offs of goodwill, any of which could harm our financial condition. We cannot predict the number, timing or size of future joint ventures or acquisitions, or the effect that any such transactions might have on our operating results.

Risks Related to Development, Clinical Testing and Regulatory Approval of Our Product Candidates

The regulatory approval processes of the FDA, EMA and regulators in other jurisdictions are lengthy, time-consuming and inherently unpredictable. If we, or our collaborators, are unable to obtain timely regulatory approval for our product candidates, our business will be substantially harmed.

The regulatory approval process is expensive and the time required to obtain approval from the FDA, EMA or other regulatory authorities in other jurisdictions to sell any product is uncertain and may take years. Whether regulatory approval will be granted is unpredictable and depends upon numerous factors, including the substantial discretion of the regulatory authorities. Approval policies, regulations, or the type and amount of preclinical and clinical data necessary to gain approval may change during the course of a product candidate’s clinical development and may vary among jurisdictions. Other than for Glybera in the EU, neither we nor our collaborators have obtained regulatory approval for any of our product candidates. It is possible that none of our existing product candidates or any of our future product candidates will ever obtain regulatory approval, even if we expend substantial time and resources seeking such approval.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA, EMA or other regulatory authorities may disagree with the design or implementation of our or our collaborators’ clinical trials;
- we or our collaborators may be unable to demonstrate to the satisfaction of the FDA, EMA or other regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA, EMA or other regulatory authorities for approval;
- we, or our collaborators, may be unable to demonstrate that a product candidate’s clinical and other benefits outweigh its safety risks;

- the FDA, EMA or other regulatory authorities may disagree with our or our collaborators' interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a New Drug Application, or NDA, or other submission or to obtain regulatory approval in the U.S. or elsewhere;
- the FDA, EMA or other regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we or our collaborators contract for clinical and commercial supplies; and
- the approval policies or regulations of the FDA, EMA or other regulatory authorities outside of the U.S. may significantly change in a manner rendering our or our collaborators' clinical data insufficient for approval.

Even if we, or our collaborators, obtain approval for a particular product, regulatory authorities may grant approval contingent on the performance of costly post-approval clinical trials, or may approve a product with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product.

Clinical drug development involves a lengthy and expensive process with uncertain timelines and uncertain outcomes. If clinical trials are prolonged or delayed, we, or our collaborators, may be unable to commercialize our product candidates on a timely basis.

Clinical testing of product candidates is expensive and, depending on the stage of development, can take a substantial period of time to complete. Clinical trial outcomes are inherently uncertain, and failure can occur at any time during the clinical development process.

Clinical trials can be halted or delayed for a variety of reasons, including those related to:

- side effects or adverse events in study participants presenting an unacceptable safety risk;
- inability to reach agreement with prospective contract research organizations, or CROs, and clinical trial sites, or the breach of such agreements;
- failure of third-party contractors, such as CROs, or investigators to comply with regulatory requirements;
- delay or failure in obtaining the necessary approvals from regulators or institutional review boards, or IRBs, in order to commence a clinical trial at a prospective trial site, or their suspension or termination of a clinical trial once commenced;
- a requirement to undertake and complete additional preclinical studies to generate data required to support the submission of an NDA;
- inability to enroll sufficient patients to complete a protocol, particularly in orphan diseases;
- difficulty in having patients complete a trial or return for post-treatment follow-up;
- clinical sites deviating from trial protocol or dropping out of a trial;
- problems with drug product or drug substance storage and distribution;
- adding new clinical trial sites;
- our inability to manufacture, or obtain from third parties, adequate supply of drug substance or drug product sufficient to complete our preclinical studies and clinical trials; and
- governmental or regulatory delays and changes in regulatory requirements, policy and guidelines.

The results of any Phase 3 or other pivotal clinical trial may not be adequate to support marketing approval. These clinical trials are lengthy and, with respect to non-orphan indications, usually involve many hundreds to thousands of patients. In addition, if the FDA, EMA or another applicable regulator disagrees with our or our collaborator's choice of the key testing criterion, or primary endpoint, or the results for the primary endpoint are not robust or significant relative to the control group of patients not receiving the experimental therapy, such regulator may refuse to approve our product candidate in the region in which it has jurisdiction. The FDA, EMA or other applicable non-U.S. regulators also may require additional clinical trials as a condition for approving any of these product candidates.

We could also encounter delays if a clinical trial is suspended or terminated by us, by our collaborators, by the IRBs of the institutions in which such trial is being conducted, by any Data Safety Monitoring Board for such trial, or by the FDA, EMA or other regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA, EMA or other regulatory authorities

resulting in the imposition of a clinical hold, product candidate manufacturing problems, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. In addition, delays can occur due to safety concerns arising from trials or other clinical data regarding another company's product candidate in the same compound class as one of ours.

If we or our collaborators experience delays in the completion of, or termination of, any clinical trial of one of our product candidates, the commercial prospects of the product candidate will be harmed, could shorten the patent protection period during which we may have the exclusive right to commercialize our products and our or our collaborators' ability to commence product sales and generate product revenue from the product will be delayed. In addition, any delays in completing our clinical trials will increase our costs and slow down our product candidate development and approval process. Any of these occurrences may harm our business, financial condition and prospects significantly. In addition, many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

Our TV-45070 and GDC-0276 product candidates for treatment of pain target novel molecular mechanisms. Regulatory authorities may require more extensive studies of the long-term effects of such product candidates for regulatory approval, which could delay development of our product candidates or our future product candidates based on novel mechanisms.

Our clinical trials may fail to demonstrate adequately the safety and efficacy of our product candidates, which could prevent or delay regulatory approval and commercialization.

Before obtaining regulatory approvals for the commercial sale of our products, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that the product candidate is both safe and effective for use in each target indication. Clinical trials often fail to demonstrate safety and efficacy of the product candidate studied for the target indication. Most product candidates that commence clinical trials are never approved as products.

In the case of our product candidates, we are seeking to develop treatments for diseases for which there is relatively limited clinical experience, and, in some cases our clinical trials use novel end points and measurement methodologies, which adds a layer of complexity to our clinical trials and may delay regulatory approval. In addition, our focus on orphan and niche markets may cause us to select target indications that are in more challenging therapeutic areas. For example, clinical trials for pain, the indication for which TV-45070 is being developed, are inherently difficult to conduct. The primary measure of pain is subjective patient feedback, which can be influenced by factors outside of our control, and can vary widely from day to day for a particular patient, and from patient to patient and site to site within a clinical study. The placebo effect also tends to have a more significant impact on pain trials.

If our product candidates are not shown to be both safe and effective in clinical trials, we will not be able to obtain regulatory approval or commercialize these product candidates and products. In such case, we would need to develop other compounds and conducting associated preclinical testing and clinical trials, as well as the potential need for additional financing, would have a material adverse effect on our business, growth prospects, operating results, financial condition and results of operations.

We may find it difficult to enroll patients in our clinical studies, including for orphan or niche indications, which could delay or prevent clinical studies of our product candidates.

We may not be able to identify, recruit and enroll a sufficient number of patients, or those with required or desired characteristics to achieve diversity in a study, to complete our clinical studies in a timely manner. Patient enrollment for clinical trials for orphan and niche indications and for more prevalent conditions is affected by factors including:

- severity of the disease under investigation;
- design of the study protocol;
- size of the patient population;
- eligibility criteria for the study in question;
- perceived risks and benefits of the product candidate under study;
- proximity and availability of clinical study sites for prospective patients;
- availability of competing therapies and clinical studies;
- efforts to facilitate timely enrollment in clinical studies; and

- patient referral practices of physicians.

The limited patient populations in orphan and niche indications present significant recruitment challenges for clinical trials. For example, studies estimate the prevalence of LPLD to be approximately 1:1,000,000 and the prevalence of primary EM, to be approximately 43,000 patients in the U.S. Primary EM is a condition of EM that is not caused by another disease or disorder. Many of these patients may not be suitable or available for clinical trials. This means that we or our collaborators generally will have to run multi-site and potentially multi-national trials, which can be expensive and require close coordination and supervision. If we experience delays in completing our clinical trials, such delays could result in increased costs, delays in advancing our product development, delays in testing the effectiveness of our technology or termination of the clinical studies altogether.

If we fail to obtain or maintain orphan drug designation or other regulatory exclusivity for some of our product candidates, our competitive position would be harmed.

A product candidate that receives orphan drug designation can benefit from a streamlined regulatory process as well as potential commercial benefits following approval. Currently, this designation provides market exclusivity in the U.S. and the EU for seven years and ten years, respectively, if a product is the first such product approved for such orphan indication. This market exclusivity does not, however, pertain to indications other than those for which the drug was specifically designated in the approval, nor does it prevent other types of drugs from receiving orphan designations or approvals in these same indications. Further, even after an orphan drug is approved, the FDA can subsequently approve a drug with similar chemical structure for the same condition if the FDA concludes that the new drug is clinically superior to the orphan product or a market shortage occurs.

In the EU, orphan exclusivity may be reduced to six years if the drug no longer satisfies the original designation criteria or can be lost altogether if the marketing authorization holder consents to a second orphan drug application or cannot supply enough drug, or when a second applicant demonstrates its drug is “clinically superior” to the original orphan drug. TV-45070 has received both fast track and orphan drug designations for the treatment of EM by the FDA. If we seek orphan drug designations for other indications or in other jurisdictions, such as for TV-45070 in the EU, we may fail to receive such orphan drug designations and, even if we succeed, such orphan drug designations may fail to result in or maintain orphan drug exclusivity upon approval, which would harm our competitive position.

Results of earlier clinical trials may not be predictive of the results of later-stage clinical trials.

The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. Interpretation of results from early, usually smaller, studies that suggest a clinically meaningful response in some patients, requires caution. Results from later stages of clinical trials enrolling more patients may fail to show the desired safety and efficacy results or otherwise fail to be consistent with the results of earlier trials of the same product candidates. Later clinical trial results may not replicate earlier clinical trials for a variety of reasons, including differences in trial design, different trial endpoints (or lack of trial endpoints in exploratory studies), patient population, number of patients, patient selection criteria, trial duration, drug dosage and formulation and lack of statistical power in the earlier studies. These uncertainties are enhanced where the diseases under study lack established clinical endpoints and validated measures of efficacy, as is often the case with orphan diseases for which no drugs have been developed previously. For example, our results for two small exploratory clinical trials for primary EM pain, one using a topical formulation and the other an oral formulation of TV-45070, used novel measures of efficacy assessment. While these studies provided promising results, further larger clinical trials will be necessary to confirm and extend these observations.

Changes in methods of product candidate manufacturing or formulation may result in additional costs or delay.

As product candidates are developed through preclinical to late stage clinical trials towards approval and commercialization, it is common that various aspects of the development program, such as manufacturing methods and formulation, are altered along the way in an effort to optimize processes and results. Such changes carry the risk that they will not achieve these intended objectives. Any of these changes could cause our product candidates to perform differently and affect the results of planned clinical trials or other future clinical trials conducted with the altered materials. This could delay completion of clinical trials, require the conduct of bridging clinical trials or the repetition of one or more clinical trials, increase clinical trial costs, delay approval of our product candidates and/or jeopardize our or our collaborators’ ability to commence product sales and generate revenue.

Even if we obtain and maintain approval for our product candidates from one jurisdiction, we may never obtain approval for our product candidates in other jurisdictions, which would limit our market opportunities and adversely affect our business.

Sales of our approved products are, and will be, subject to U.S. and foreign regulatory requirements governing clinical trials and marketing approval, and we plan to seek regulatory approval to commercialize our product candidates in North America, the EU and in additional foreign countries. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries and regulatory approval in one country does not ensure approval in any other country, while a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory approval process in others. For example, approval in the U.S. by the FDA does not ensure approval by regulatory authorities in other countries or jurisdictions, and approval by one foreign regulatory authority, such as the EMA for Glybera, does not ensure approval by regulatory authorities in other countries, including by the FDA. Approval procedures vary among jurisdictions and can be lengthy and expensive, and involve requirements and administrative review periods different from, and greater than, those in the U.S., including additional preclinical studies or clinical trials. Even if our product candidates are approved, regulatory approval for any product may be withdrawn by the regulatory authorities in a particular jurisdiction.

Even if a product is approved, the FDA or the EMA, as the case may be, may limit the indications for which the product may be marketed, require extensive warnings on the product labeling or require expensive and time-consuming clinical trials or reporting as conditions of approval. In many countries outside the U.S., a product candidate must be approved for reimbursement before it can be approved for sale in that country. In some cases, the price that we intend to charge for a product is also subject to approval.

Regulatory authorities in countries outside of the U.S. and the EMA also have their own requirements for approval of product candidates with which we must comply prior to marketing in those countries. Obtaining foreign regulatory approvals and compliance with such foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our current and any future products, in certain countries.

If we fail to receive applicable marketing approvals or comply with the regulatory requirements in international markets, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed and our business will be adversely affected.

We work with outside scientists and their institutions in executing our business strategy of developing product candidates using our Extreme Genetics discovery platform. These scientists may have other commitments or conflicts of interest, which could limit our access to their expertise and harm our ability to leverage our discovery platform.

We work with scientific advisors and collaborators at academic research institutions in connection with our Extreme Genetics discovery platform. These scientific advisors serve as our link to the various families with extreme phenotypes in that these advisors may:

- identify families as potential candidates for study;
- obtain their consent to participate in our research;
- perform medical examinations and gather medical histories;
- conduct the initial analysis of suitability of the families to participate in our research based on the foregoing; and
- collect data and biological samples from the family members periodically in accordance with our study protocols.

These scientists and collaborators are not our employees, rather they serve as either independent contractors or the primary investigators under research collaboration agreements that we have with their sponsoring academic or research institution. Such scientists and collaborators may have other commitments that would limit their availability to us. Although our scientific advisors generally agree not to do competing work, if an actual or potential conflict of interest between their work for us and their work for another entity arises, we may lose their services. It is also possible that some of our valuable proprietary knowledge may become publicly known through these scientific advisors if they breach their confidentiality agreements with us, which would cause competitive harm to our business.

Risks Related to Commercialization

If, in the future, we are unable to establish our own sales, marketing and distribution capabilities or enter into licensing or collaboration agreements for these purposes, we may not be successful in independently commercializing any future products.

We do not have a sales or marketing infrastructure and, as a company, have no sales, marketing or distribution experience. Our strategy involves, in part, building our own commercial infrastructure to selectively commercialize future products in niche or orphan indications. Where we believe such involvement would advance our business, we seek to retain the right to participate in the future development and commercialization of such products. For example, we have a co-promotion option for TV-45070 with Teva in the U.S.

To develop internal sales, distribution and marketing capabilities, we will have to invest significant amounts of financial and management resources, some of which will need to be committed prior to any confirmation that any of our proprietary product candidates will be approved. For any future products for which we decide to perform sales, marketing and distribution functions ourselves, we could face a number of additional risks, including:

- our inability to recruit and retain adequate numbers of effective sales and marketing personnel to or develop alternative sales channels;
- the inability of sales personnel to obtain access to physicians or persuade adequate numbers of physicians to prescribe any future products;
- the lack of complementary products to be offered by sales personnel, which may put us at a competitive disadvantage relative to companies with more extensive product lines; and
- unforeseen costs and expenses associated with creating and maintaining an independent sales and marketing organization.

Where and when appropriate, we may elect to utilize contract sales forces or distribution partners to assist in the commercialization of our product candidates. If we enter into arrangements with third parties to perform sales, marketing and distribution services for a product, the resulting revenue or the profitability from this revenue to us is likely to be lower than if we had sold, marketed and distributed that product ourselves. In addition, we may not be successful in entering into arrangements with third parties to sell, market and distribute our product candidates or may be unable to do so on terms that are favorable to us. We likely will have little control over such third parties, and any of these third parties may fail to devote the necessary resources and attention to sell, market and distribute our current or any future products effectively.

Even if we receive regulatory approval to commercialize any of the product candidates that we develop independently, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense.

Any regulatory approvals that we receive for our product candidates we commercialize will be subject to limitations on the approved indicated uses for which the product may be marketed or subject to certain conditions of approval, and may contain requirements for potentially costly post-approval trials, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the marketed product.

For any approved product, we will need to ensure continued compliance with extensive regulations and requirements regarding the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion and recordkeeping for the product. These requirements include submissions of safety and other post-approval information and reports, as well as continued compliance with current good manufacturing practices, or cGMP, and current good clinical practices, or cGCP, for any clinical trials that we or our collaborators conduct post-approval. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of the product, withdrawal of the product from the market or voluntary or mandatory product recalls;
- fines, warning letters or holds on any post-approval clinical trials;

- refusal by the FDA, EMA or another applicable regulatory authority to approve pending applications or supplements to approved applications filed by us or our collaborators, or suspension or revocation of product license approvals;
- product seizure or detention, or refusal to permit the import or export of products; and
- injunctions or the imposition of civil or criminal penalties.

Occurrence of any of the foregoing could have a material and adverse effect on our business and results of operations.

If the market opportunities for any product that we or our collaborators develop are smaller than we believe they are, our revenue may be adversely affected and our business may suffer.

We intend to focus our independent product development on treatments for rare diseases. Our projections of both the number of people who have these diseases, as well as the subset of people with these diseases who have the potential to benefit from treatment with our product candidates, are based on estimates. Currently, most reported estimates of the prevalence of these diseases are based on studies of small subsets of the population in specific geographic areas, which are then extrapolated to estimate the prevalence of the diseases in the U.S. or elsewhere. For example, studies estimate the prevalence of LPLD to be approximately 1:1,000,000, the prevalence of primary EM to be approximately 43,000 patients, and the prevalence of Dravet Syndrome, or DS, to be 7,500-15,000 patients in the U.S. These estimates may prove to be incorrect. If the prevalence of such diseases is smaller than we have projected, then, even if our products are approved, we may not be able to successfully commercialize them.

Even if we or our collaborators receive approval to commercialize our products, unfavorable pricing regulations and challenging third-party coverage and reimbursement practices could harm our business.

Our or any collaborators' ability to commercialize any products successfully will depend, in part, on the extent to which coverage and reimbursement for these products and related treatments will be available from government healthcare programs, private health insurers, managed care plans, and other organizations. Government authorities and third-party payers, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels. A primary trend in the U.S. healthcare industry is cost containment. Government authorities and third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that coverage and reimbursement will be available for any product that we or any collaborator commercialize and, if reimbursement is available, the level of reimbursement. In addition, coverage and reimbursement may impact the demand for, or the price of, any product candidate for which we or a collaborator obtains marketing approval. If coverage and reimbursement are not available or reimbursement is available only to limited levels, we or our collaborators may not be able to successfully commercialize any product candidate for which marketing approval is obtained.

There may be significant delays in obtaining coverage and reimbursement for newly approved drugs, and coverage may be more limited than the purposes for which the drug is approved by the FDA, EMA or other regulatory authorities. Moreover, eligibility for coverage and reimbursement does not imply that a drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution expenses. Interim reimbursement levels for new drugs, if applicable, may also be insufficient to cover our and any collaborator's costs and may not be made permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other services. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payers and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the U.S. Third-party payers often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies. Our or any collaborator's inability to promptly obtain coverage and profitable payment rates from both government-funded and private payers for any approved products that we or our collaborators develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

Our target patient populations in orphan and niche indications, where we intend to selectively develop and commercialize products independently, are relatively small. In order for therapies that are designed to treat smaller

patient populations to be commercially viable, the reimbursement for such therapies needs to be higher, on a relative basis, to account for the lack of volume. Accordingly, we will need to implement a coverage and reimbursement strategy for any approved product that accounts for the smaller potential market size. If we are unable to establish or sustain coverage and adequate reimbursement for our current and any future products from third party payers or the government, the adoption of those products and sales revenue will be adversely affected, which, in turn, could adversely affect the ability to market or sell those products.

Recently enacted and future legislation may increase the difficulty and cost for us to commercialize any products that we or our collaborators develop and affect the prices we may obtain.

The U.S. and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell any of our products profitably, once such products are approved for sale. Among policy makers and payers in the U.S. and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the U.S., the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, collectively, PPACA, was enacted, which includes measures that have significantly changed, or will significantly change, the way healthcare is financed by both governmental and private insurers. Among the provisions of PPACA of importance to the pharmaceutical industry are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs, that began in 2011;
- an increase in the rebates a manufacturer must pay under the Medicaid Drug Rebate Program to 23.1% and 13% of the average manufacturer price for branded and generic drugs, respectively;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts to negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility categories for certain individuals with income at or below 133% of the Federal Poverty Level beginning in 2014, thereby potentially increasing manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- new requirements under the federal Open Payments program, created under Section 6002 of the PPACA and its implementing regulations that manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) report annually to the U.S. Department of Health and Human Services, or HHS, information related to "payments or other transfers of value" made or distributed to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals and that applicable manufacturers and applicable group purchasing organizations report annually to the HHS ownership and investment interests held by physicians (as defined above) and their immediate family members, with data collection required beginning August 1, 2013 and reporting to the Centers for Medicare & Medicaid Services, or CMS, required by March 31, 2014 and by the 90th day of each subsequent calendar year, and disclosure of such information to be made on a publicly available website by September 2014;
- a requirement to annually report drug samples that manufacturers and distributors provide to physicians, effective April 1, 2012;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance;
- a licensure framework for follow-on biologic products;

- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- creation of the Independent Payment Advisory Board which, beginning in 2014, will have authority to recommend certain changes to the Medicare program that could result in reduced payments for prescription drugs and those recommendations could have the effect of law even if Congress does not act on the recommendations; and
- establishment of a Center for Medicare Innovation at CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending that began on January 1, 2011.

In the EU, similar political, economic and regulatory developments may affect our ability to profitably commercialize our current or any future products. In addition to continuing pressure on prices and cost containment measures, legislative developments at the EU or member state level may result in significant additional requirements or obstacles that may increase our operating costs. In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. Glybera and our future products, if any, might not be considered medically reasonable and necessary for a specific indication or cost-effective by third-party payors, coverage, an adequate level of reimbursement might not be available for such products and third-party payors' reimbursement policies might adversely affect our or our collaborators' ability to sell Glybera and any future products profitably.

Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We cannot be sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-approval testing and other requirements.

We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the U.S. or abroad. If we or our collaborators are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we or our collaborators are not able to maintain regulatory compliance, our product candidates may lose any marketing approval that may have been obtained and we may not achieve or sustain profitability, which would adversely affect our business.

Foreign governments tend to impose strict price controls, which may adversely affect our future profitability.

In most foreign countries, particularly in those in the EU, prescription drug pricing and/or reimbursement is subject to governmental control. In those countries that impose price controls, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we or our collaborators may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies.

Some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we or our collaborators might obtain marketing approval for a product in a particular country, but then be subject to price regulations that delay commercial launch of the product, possibly for lengthy time periods, and negatively impact the revenue that are generated from the sale of the product in that country. If reimbursement of such products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, or if there is competition from lower priced cross-border sales, our profitability will be negatively affected.

Risks Related to Our Dependence on Third Parties

We depend on our collaborative relationship with Teva to further develop and commercialize TV-45070, and if our relationship is not successful or is terminated, we may not be able to effectively develop and/or commercialize TV-45070, which would have a material adverse effect on our business.

We depend on Teva to collaborate with us to develop and globally commercialize TV-45070. Under the agreement, Teva controls all decision-making with respect to the clinical development and commercialization for TV-45070.

As a result of our dependence on Teva, the eventual success or commercial viability of TV-45070 is largely beyond our control. The financial returns to us, if any, depend in large part on the achievement of development and commercialization milestones, plus a share of any revenue from sales. Therefore, our success, and any associated financial returns to us and our investors, will depend in large part on Teva's performance under the agreement. We are subject to a number of additional specific risks associated with our dependence on our collaborative relationship with Teva, including:

- adverse decisions by Teva or the Joint Development Committee regarding the development and commercialization of TV-45070;
- possible disagreements as to the timing, nature and extent of our development plans, including clinical trials or regulatory approval strategy;
- loss of significant rights if we fail to meet our obligations under the agreement;
- our limited control over clinical trials of TV-45070;
- changes in key management personnel at Teva, including in members of the Joint Development Committee; and
- possible disagreements with Teva regarding the agreement, for example, with regard to ownership of intellectual property rights.

If either we or Teva fail to perform our respective obligations, any clinical trial, regulatory approval or development progress could be significantly delayed or halted, could result in costly or time-consuming litigation or arbitration and could have a material adverse effect on our business.

Decisions by Teva to emphasize other drug candidates currently in its portfolio ahead of our product candidates, or to add competitive agents to its portfolio could result in a decision to terminate the agreement, in which event, among other things, we may be responsible for paying any remaining costs of all ongoing or future clinical trials.

In addition, Teva's executive offices and a substantial percentage of their manufacturing capabilities are located in Israel. Teva's Israeli operations are dependent upon materials imported from outside Israel, and Teva also exports significant amounts of products from Israel. Accordingly, our collaboration with Teva could be materially and adversely affected by acts of terrorism or if major hostilities were to occur in the Middle East or trade between Israel and its present trading partners were curtailed, including as a result of acts of terrorism in the U.S. or elsewhere.

Any of the above discussed scenarios could adversely affect the timing and extent of our development and commercialization activities, which could cause significant delays and funding shortfalls for those activities and seriously harm our business.

Our prospects for successful development and commercialization of our partnered products and product candidates are dependent upon the research, development and marketing efforts of our collaborators.

We have no control over the resources, time and effort that our collaborators may devote to our programs and limited access to information regarding or resulting from such programs. We are dependent on uniQure, and its licensee Chiesi to successfully commercialize Glybera and on Teva, Genentech, and Merck & Co., Inc., or Merck, to fund and conduct the research and any clinical development of product candidates under our collaboration with each of them, and for the successful regulatory approval, marketing and commercialization of one or more of such products or product candidates. Such success will be subject to significant uncertainty.

Our ability to recognize revenue from successful collaborations may be impaired by multiple factors including:

- a collaborator may shift its priorities and resources away from our programs due to a change in business strategies, or a merger, acquisition, sale or downsizing of its company or business unit;
- a collaborator may cease development in therapeutic areas which are the subject of our strategic alliances;
- a collaborator may change the success criteria for a particular program or product candidate thereby delaying or ceasing development of such program or candidate;
- a significant delay in initiation of certain development activities by a collaborator will also delay payment of milestones tied to such activities, thereby impacting our ability to fund our own activities;
- a collaborator could develop a product that competes, either directly or indirectly, with our current or future products, if any;

- a collaborator with commercialization obligations may not commit sufficient financial or human resources to the marketing, distribution or sale of a product;
- a collaborator with manufacturing responsibilities may encounter regulatory, resource or quality issues and be unable to meet demand requirements;
- a collaborator may exercise its rights under the agreement to terminate our collaboration;
- a dispute may arise between us and a collaborator concerning the research or development of a product candidate or commercialization of a product resulting in a delay in milestones, royalty payments or termination of a program and possibly resulting in costly litigation or arbitration which may divert management attention and resources;
- a collaborator may not adequately protect the intellectual property rights associated with a product or product candidate; and
- a collaborator may use our proprietary information or intellectual property in such a way as to invite litigation from a third party.

If our collaborators do not perform in the manner we expect or fulfill their responsibilities in a timely manner, or at all, the clinical development, regulatory approval and commercialization efforts could be delayed, terminated or be commercially unsuccessful. Conflicts between us and our collaborators may arise. In the event of termination of one or more of our collaboration agreements, it may become necessary for us to assume the responsibility of any terminated product or product candidates at our own expense or seek new collaborators. In that event, we would likely be required to limit the size and scope of one or more of our independent programs or increase our expenditures and seek additional funding which may not be available on acceptable terms or at all, and our business would be materially and adversely affected.

We may not be successful in establishing new collaborations or maintaining our existing alliances, which could adversely affect our ability to develop future product candidates and commercialize future products.

We may seek to enter into additional product collaborations in the future, including alliances with other biotechnology or pharmaceutical companies, to enhance and accelerate the development of our future product candidates and the commercialization of any resulting products. We face significant competition in seeking appropriate collaborators and the negotiation process is time-consuming and complex. Moreover, we may not be successful in our efforts to establish other collaborations or other alternative arrangements for any future product candidates because our research and development pipeline may be insufficient, our product candidates may be deemed to be at too early of a stage of development for collaboration effort and/or third parties may view our product candidates as lacking the requisite potential to demonstrate safety and efficacy. Even if we are successful in our efforts to establish collaborations, the terms that we agree upon may not be favorable to us and we may not be able to maintain such collaborations if, for example, development or approval of a product candidate is delayed or sales of an approved product are disappointing.

If any of our existing collaboration agreements is terminated, or if we determine that entering into other product collaborations is in our best interest but we either fail to enter into, delay in entering into or fail to maintain such collaborations:

- the development of certain of our current or future product candidates may be terminated or delayed;
- our cash expenditures related to development of our product candidates would increase significantly and we may need to seek additional financing sooner than expected;
- we may be required to hire additional employees or otherwise develop expertise, such as clinical, regulatory, sales and marketing expertise, which we do not currently have;
- we will bear all of the risk related to the development of any such product candidates; and
- the competitiveness of any product that is commercialized could be reduced.

We intend to rely on third-party manufacturers to produce our clinical product candidate supplies. Any failure by a third-party manufacturer to produce acceptable supplies for us may delay or impair our ability to initiate or complete our clinical trials or commercialize approved products.

We do not currently own or operate any manufacturing facilities nor do we have any in-house manufacturing experience or personnel. We rely on our collaborators to manufacture product candidates licensed to them or work with multiple third party contract manufacturers to produce sufficient quantities of materials required for the

manufacture of our product candidates for preclinical testing and clinical trials and intend to do so for the commercial manufacture of our products. If we are unable to arrange for such third-party manufacturing sources, or fail to do so on commercially reasonable terms, we may not be able to successfully produce, sufficient supply of product candidate or we may be delayed in doing so. Such failure or substantial delay could materially harm our business.

Reliance on third-party manufacturers entails risks to which we would not be subject if we manufactured product candidates ourselves, including reliance on the third party for regulatory compliance and quality control and assurance, volume production, the possibility of breach of the manufacturing agreement by the third party because of factors beyond our control (including a failure to synthesize and manufacture our product candidates in accordance with our product specifications) and the possibility of termination or nonrenewal of the agreement by the third party at a time that is costly or damaging to us. In addition, the FDA, EMA and other regulatory authorities require that our product candidates be manufactured according to cGMP and similar foreign standards. Pharmaceutical manufacturers and their subcontractors are required to register their facilities and/or products manufactured at the time of submission of the marketing application and then annually thereafter with the FDA and certain state and foreign agencies. They are also subject to periodic unannounced inspections by the FDA, state and other foreign authorities. Any subsequent discovery of problems with a product, or a manufacturing or laboratory facility used by us or our collaborators, may result in restrictions on the product or on the manufacturing or laboratory facility, including marketed product recall, suspension of manufacturing, product seizure, or a voluntary withdrawal of the drug from the market. Any failure by our third-party manufacturers to comply with cGMP or failure to scale up manufacturing processes, including any failure to deliver sufficient quantities of product candidates in a timely manner, could lead to a delay in, or failure to obtain, regulatory approval of any of our product candidates.

We rely on third parties to monitor, support, conduct and/or oversee clinical trials of the product candidates that we are developing independently and, in some cases, to maintain regulatory files for those product candidates. We may not be able to obtain regulatory approval for our product candidates or commercialize any products that may result from our development efforts, if we are not able to maintain or secure agreements with such third parties on acceptable terms, if these third parties do not perform their services as required, or if these third parties fail to timely transfer any regulatory information held by them to us.

We rely on entities outside of our control, which may include academic institutions, CROs, hospitals, clinics and other third-party collaborators, to monitor, support, conduct and/or oversee preclinical and clinical studies of our current and future product candidates. We also rely on third parties to perform clinical trials on our current and future product candidates when they reach that stage. As a result, we have less control over the timing and cost of these studies and the ability to recruit trial subjects than if we conducted these trials with our own personnel.

If we are unable to maintain or enter into agreements with these third parties on acceptable terms, or if any such engagement is terminated prematurely, we may be unable to enroll patients on a timely basis or otherwise conduct our trials in the manner we anticipate. In addition, there is no guarantee that these third parties will devote adequate time and resources to our studies or perform as required by our contract or in accordance with regulatory requirements, including maintenance of clinical trial information regarding our product candidates. If these third parties fail to meet expected deadlines, fail to transfer to us any regulatory information in a timely manner, fail to adhere to protocols or fail to act in accordance with regulatory requirements or our agreements with them, or if they otherwise perform in a substandard manner or in a way that compromises the quality or accuracy of their activities or the data they obtain, then clinical trials of our future product candidates may be extended or delayed with additional costs incurred, or our data may be rejected by the FDA, EMA or other regulatory agencies.

Ultimately, we are responsible for ensuring that each of our clinical trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities.

We and our CROs are required to comply with cGCP regulations and guidelines enforced by the FDA, the competent authorities of the member states of the EEA and comparable foreign regulatory authorities for products in clinical development. Regulatory authorities enforce these cGCP regulations through periodic inspections of clinical trial sponsors, principal investigators and clinical trial sites. If we or any of our CROs fail to comply with applicable cGCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and our submission of marketing applications may be delayed or the FDA may require us to perform additional clinical trials before approving our marketing applications. Upon inspection, the FDA could determine that any of our clinical trials fail or

have failed to comply with applicable cGCP regulations. In addition, our clinical trials must be conducted with product produced under the cGMP regulations enforced by the FDA, and our clinical trials may require a large number of test subjects. Our failure to comply with these regulations may require us to repeat clinical trials, which would delay the regulatory approval process and increase our costs. Moreover, our business may be implicated if any of our CROs violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

If any of our clinical trial sites terminates for any reason, we may experience the loss of follow-up information on patients enrolled in our ongoing clinical trials unless we are able to transfer the care of those patients to another qualified clinical trial site. Further, if our relationship with any of our CROs is terminated, we may be unable to enter into arrangements with alternative CROs on commercially reasonable terms, or at all.

Switching or adding CROs or other suppliers can involve substantial cost and require extensive management time and focus. In addition, there is a natural transition period when a new CRO or supplier commences work. As a result, delays may occur, which can materially impact our ability to meet our desired clinical development timelines. If we are required to seek alternative supply arrangements, the resulting delays and potential inability to find a suitable replacement could materially and adversely impact our business.

Risks Related to Intellectual Property

We could be unsuccessful in obtaining or maintaining adequate patent protection for one or more of our products or product candidates.

Our commercial success will depend, in large part, on our ability to obtain and maintain patent and other intellectual property protection with respect to our product candidates. Patents might not be issued or granted with respect to our patent applications that are currently pending, and issued or granted patents might later be found to be invalid or unenforceable, be interpreted in a manner that does not adequately protect our current product or any future products, or fail to otherwise provide us with any competitive advantage. The patent position of biotechnology and pharmaceutical companies is generally uncertain because it involves complex legal and factual considerations. The standards applied by the U.S. Patent and Trademark Office, or USPTO, and foreign patent offices in granting patents are not always applied uniformly or predictably. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable in biotechnology and pharmaceutical patents. Consequently, patents may not issue from our pending patent applications. As such, we do not know the degree of future protection that we will have on our proprietary products and technology, if any, and a failure to obtain adequate intellectual property protection with respect to our product candidates and proprietary technology could have a material adverse impact on our business.

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or applications will be due to be paid to the USPTO and various governmental patent agencies outside of the US in several stages over the lifetime of the patents and/or applications. We employ reputable law firms and other professionals and rely on such third parties to effect payment of these fees with respect to the patents and patent applications that we own, and we rely upon our licensors or our other collaborators to effect payment of these fees with respect to the patents and patent applications that we license. The USPTO and various non-US governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply with respect to the patents and patent applications that we own, and we rely upon our licensors or our other collaborators to effect compliance with respect to the patents and patent applications that we license. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, our competitors might be able to enter the market and this circumstance would have a material adverse effect on our business.

Our intellectual property rights will not necessarily provide us with competitive advantages.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business, or permit us to maintain our competitive advantage. The following examples are illustrative:

- others may be able to make compounds that are similar to our product candidates but that are not covered by the claims of the patents that we or our collaborators own or have exclusively licensed;
- others may independently develop similar or alternative technologies without infringing our intellectual property rights;
- issued patents that we own or have exclusively licensed may not provide us with any competitive advantages, or may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- we may obtain patents for certain compounds many years before we obtain marketing approval for products containing such compounds, and because patents have a limited life, which may begin to run prior to the commercial sale of the related product, the commercial value of our patents may be limited;
- our competitors might conduct research and development activities in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may fail to develop additional proprietary technologies that are patentable;
- the laws of certain foreign countries may not protect our intellectual property rights to the same extent as the laws of the U.S., or we may fail to apply for or obtain adequate intellectual property protection in all the jurisdictions in which we operate; and
- the patents of others may have an adverse effect on our business, for example by preventing us from marketing one or more of our product candidates for one or more indications.

Any of the aforementioned threats to our competitive advantage could have a material adverse effect on our business.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the U.S. can be less extensive than those in the U.S. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the U.S. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the U.S., or from selling or importing products made using our inventions in and into the U.S. or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the U.S. These products may compete with our current or future products, if any, and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

Our patents covering one or more of our products or product candidates could be found invalid or unenforceable if challenged.

Any of our intellectual property rights could be challenged or invalidated despite measures we take to obtain patent and other intellectual property protection with respect to our product candidates and proprietary technology. For example, if we were to initiate legal proceedings against a third party to enforce a patent covering one of our product

candidates, the defendant could counterclaim that our patent is invalid and/or unenforceable. In patent litigation in the U.S. and in some other jurisdictions, defendant counterclaims alleging invalidity and/or unenforceability are commonplace. Grounds for a validity challenge could be an alleged failure to meet any of several statutory requirements, for example, lack of novelty, obviousness or non-enablement. Grounds for an unenforceability assertion could be an allegation that someone connected with prosecution of the patent withheld material information from the USPTO or the applicable foreign counterpart, or made a misleading statement, during prosecution. A litigant or the USPTO itself could challenge our patents on this basis even if we believe that we have conducted our patent prosecution in accordance with the duty of candor and in good faith. The outcome following such a challenge is unpredictable.

With respect to challenges to the validity of our patents, for example, there might be invalidating prior art, of which we and the patent examiner were unaware during prosecution. If a defendant were to prevail on a legal assertion of invalidity and/or unenforceability, we would lose at least part, and perhaps all, of the patent protection on a product candidate. Even if a defendant does not prevail on a legal assertion of invalidity and/or unenforceability, our patent claims may be construed in a manner that would limit our ability to enforce such claims against the defendant and others. The cost of defending such a challenge, particularly in a foreign jurisdiction, and any resulting loss of patent protection could have a material adverse impact on one or more of our product candidates and our business.

Enforcing our intellectual property rights against third parties may also cause such third parties to file other counterclaims against us, which could be costly to defend, particularly in a foreign jurisdiction, and could require us to pay substantial damages, cease the sale of certain products or enter into a license agreement and pay royalties (which may not be possible on commercially reasonable terms or at all). Any efforts to enforce our intellectual property rights are also likely to be costly and may divert the efforts of our scientific and management personnel.

Patent protection and patent prosecution for some of our product candidates is dependent on, and the ability to assert patents and defend them against claims of invalidity is maintained by, third parties.

There have been and may be times in the future when certain patents that relate to our product candidates or any approved products are controlled by our licensees or licensors. Although we may, under such arrangements, have rights to consult with our collaborators on actions taken as well as back-up rights of prosecution and enforcement, we have in the past and may in the future relinquish rights to prosecute and maintain patents and patent applications within our portfolio as well as the ability to assert such patents against infringers. Currently, some of these rights relating to the patent portfolios for Glybera, TV-45070 and some of our earlier stage product candidates are held by our collaborators.

If any current or future licensee or licensor with rights to prosecute, assert or defend patents related to our product candidates fails to appropriately prosecute and maintain patent protection for patents covering any of our product candidates, or if patents covering any of our product candidates are asserted against infringers or defended against claims of invalidity or unenforceability in a manner which adversely affects such coverage, our ability to develop and commercialize any such product candidate may be adversely affected and we may not be able to prevent competitors from making, using and selling competing products.

We may be involved in lawsuits to protect or enforce our patents or the patents of our licensors, which could be expensive, time consuming and unsuccessful.

Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that a patent of ours or one of our licensors is not valid or is unenforceable, or may refuse to stop the other party in such infringement proceeding from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation or defense proceedings could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly, and could put any of our patent applications at risk of not yielding an issued patent.

Interference proceedings, derivation proceedings, entitlement proceedings, ex parte reexamination, inter partes reexamination, inter partes review, post-grant review, and opposition proceedings provoked by third parties or brought by the USPTO or any foreign patent authority may be used to challenge inventorship, ownership, claim scope, or validity of our patent applications. An unfavorable outcome could require us to cease using the related technology or to attempt to license rights to it from the prevailing party. Our business could be harmed if the

prevailing party does not offer us a license on commercially reasonable terms, if any license is offered at all. Litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distract our management and other employees.

We may not be able to prevent, alone or with our licensors, misappropriation of our trade secrets or confidential information, particularly in countries where the laws may not protect those rights as fully as in the U.S. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common shares.

Claims that our product candidates or the sale or use of our future products infringe the patent or other intellectual property rights of third parties could result in costly litigation or could require substantial time and money to resolve, even if litigation is avoided.

Our commercial success depends upon our ability to develop product candidates and commercialize products that may be approved in the future, using our proprietary technology without infringing the intellectual property rights of others. Our product or product candidates or any uses of them may now and in the future infringe third-party patents or other intellectual property rights. Third parties might allege that we or our collaborators are infringing their patent rights or that we have misappropriated their trade secrets, or that we are otherwise violating their intellectual property rights, whether with respect to the manner in which we have conducted our research or to the composition, use or manufacture of the compounds we have developed or are developing with our collaborators. Such third parties might resort to litigation against us or other parties we have agreed to indemnify, which litigation could be based on either existing intellectual property or intellectual property that arises in the future.

It is possible that relevant patents or patent applications held by third parties will cover our product candidates at the time of launch and we may also fail to identify, relevant patents or patent applications held by third parties that cover our product candidates. For example, applications filed before November 29, 2000, and certain applications filed after that date that will not be filed outside the U.S. remain confidential until patents issue. Other patent applications in the U.S. and several other jurisdictions are published approximately 18 months after the earliest filing for which priority is claimed, with such earliest filing date being commonly referred to as the priority date. Furthermore, publication of discoveries in the scientific or patent literature often lags behind actual discoveries. Therefore, we cannot be certain that we or our collaborators were the first to invent, or the first to file patent applications on, our product candidates or for their uses, or that our product candidates will not infringe patents that are currently issued or that are issued in the future. In the event that a third party has also filed a patent application covering one of our product candidates or a similar invention, we may have to participate in an adversarial proceeding, known as an interference, declared by the USPTO or its foreign counterpart to determine priority of invention. Additionally, pending patent applications and patents which have been published can, subject to certain limitations, be later amended in a manner that could cover our current or future products, if any, or their use.

Defending against claims of patent infringement, misappropriation of trade secrets or other violations of intellectual property rights could be costly and time consuming, regardless of the outcome. Thus, even if we were to ultimately prevail, or to settle at an early stage, such litigation could burden us with substantial unanticipated costs. In addition, litigation or threatened litigation could result in significant demands on the time and attention of our management team, distracting them from the pursuit of other company business. Claims that our product candidates or the sale or use of our future products infringe, misappropriate or otherwise violate third-party intellectual property rights could therefore have a material adverse impact on our business.

Most of our competitors are larger than we are and have substantially greater financial resources. They are, therefore, likely to be able to sustain the costs of complex intellectual property litigation longer than we could. In addition, the uncertainties associated with litigation could have a material adverse effect on our ability to raise the funds necessary to conduct our clinical trials, continue our internal research programs, in-license needed technology, or enter into strategic collaborations that would help us bring our product candidates to market.

In addition, any future intellectual property litigation, interference or other administrative proceedings will result in additional expense and distraction of our personnel. An adverse outcome in such litigation or proceedings may expose us or any future strategic collaborators to loss of our proprietary position, expose us to significant liabilities,

or require us to seek licenses that may not be available on commercially acceptable terms, if at all, each of which could have a material adverse effect on our business.

Unfavorable outcomes in intellectual property litigation could limit our research and development activities and/or our ability to commercialize certain products.

If third parties successfully assert their intellectual property rights against us, we might be barred from using certain aspects of our technology, or barred from developing and commercializing certain products. Prohibitions against using certain technologies, or prohibitions against commercializing certain products, could be imposed by a court or by a settlement agreement between us and a plaintiff. In addition, if we are unsuccessful in defending against allegations that we have infringed, misappropriated or otherwise violated patent or other intellectual property rights of others, we may be forced to pay substantial damage awards to the plaintiff. There is inevitable uncertainty in intellectual property litigation and we could lose, even if the case against us is weak or flawed. If litigation leads to an outcome unfavorable to us, we may be required to obtain a license from the intellectual property owner in order to continue our research and development programs or to market any resulting product. It is possible that the necessary license will not be available to us on commercially acceptable terms, or at all. Alternatively, we may be required to modify or redesign our current or future products, if any, in order to avoid infringing or otherwise violating third-party intellectual property rights. This may not be technically or commercially feasible, may render those products less competitive, or may delay or prevent the entry of those products to the market. Any of the foregoing could limit our research and development activities, our ability to commercialize one or more product candidates, or both.

In order to avoid or settle potential claims with respect to any patent or other intellectual property rights of third parties, we may choose or be required to seek a license from a third party and be required to pay license fees or royalties or both, which could be substantial. These licenses may not be available on acceptable terms, or at all. Even if we or any future collaborators were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we could be prevented from commercializing a product, or be forced, by court order or otherwise, to cease some or all aspects of our business operations, if, as a result of actual or threatened patent or other intellectual property claims, we are unable to enter into licenses on acceptable terms. Further, we could be found liable for significant monetary damages as a result of claims of intellectual property infringement. For example, we have received, and may in the future receive, offers to license and demands to license from third parties claiming that we are infringing their intellectual property or owe license fees and, even if such claims are without merit, we could fail to successfully avoid or settle such claims.

If Teva, uniQure, Genentech or Merck license or otherwise acquire rights to intellectual property controlled by a third party in various circumstances, for example, where a product could not be legally developed or commercialized in a country without the third-party intellectual property right or, where it is decided that it would be useful to acquire such third-party right to develop or commercialize the product, they are eligible under our collaboration agreements to decrease payments payable to us on a product-by-product basis and, in certain cases, on a country-by-country basis. Any of the foregoing events could harm our business significantly.

If we breach any of the agreements under which we license the use, development and commercialization rights to our product candidates or technology from third parties, we could lose license rights that are important to our business.

The patent portfolio for Glybera is in-licensed from UBC. Under our existing license agreements, we are subject to various obligations, including diligence obligations such as development and commercialization obligations, as well as potential royalty payments and other obligations. If we fail to comply with any of these obligations or otherwise breach our license agreements, our licensing partners may have the right to terminate the applicable license in whole or in part. Generally, the loss of any one of our current licenses, or any other license we may acquire in the future, could materially harm our business, prospects, financial condition and results of operations.

Confidentiality agreements with employees and third parties may not prevent unauthorized disclosure of trade secrets and other proprietary information, which would harm our competitive position.

In addition to patents, we rely on trade secrets, technical know-how and proprietary information concerning our Extreme Genetics discovery platform, business strategy and product candidates in order to protect our competitive position, which are difficult to protect. In the course of our research and development activities and our business activities, we often rely on confidentiality agreements to protect our proprietary information. Such confidentiality agreements are used, for example, when we talk to vendors of laboratory or clinical development services or potential strategic collaborators. In addition, each of our employees and consultants is required to sign a confidentiality

agreement and invention assignment agreement upon joining our company. Our employees, consultants, contractors, business partners or outside scientific collaborators might intentionally or inadvertently disclose our trade secret information in breach of these confidentiality agreements or our trade secrets may otherwise be misappropriated. Our collaborators might also have rights to publish data and we might fail to apply for patent protection prior to such publication. It is possible that a competitor will make use of such information, and that our competitive position will be compromised. In addition, to the extent that our employees, consultants or contractors use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions. Enforcing a claim that a third party illegally obtained and is using any of our trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the U.S. sometimes are less willing than U.S. courts to protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. If we cannot maintain the confidentiality of our proprietary technology and other confidential information, then our ability to obtain patent protection or to protect our trade secret information would be jeopardized, which would adversely affect our competitive position.

Patent reform legislation and recent court decisions could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents.

On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law, including provisions that affect the way patent applications will be prosecuted and may also affect patent litigation. The USPTO has and continues to develop and implement regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act. The full effect of these changes are currently unclear as the USPTO has not yet adopted all pertinent final rules and regulations, the courts have yet to address these provisions and the applicability of the Leahy-Smith Act and new regulations on specific patents, including our patents discussed herein, have not been determined and would need to be reviewed. Accordingly, it is not yet clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. As a result, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of patent applications and the enforcement or defense of issued patents, all of which could have a material adverse effect on our business and financial condition. On June 13, 2013, the U.S. Supreme Court decision in *Association for Molecular Pathology v. Myriad Genetics, Inc.*, held that isolated DNA sequences are not patentable. As a consequence of the *Myriad* decision, if any of our future product candidates utilize isolated human DNA as a result of our Extreme Genetics discovery platform that allows us to identify DNA sequences associated with human disease, we will not be able to obtain patents in the U.S. claiming such novel gene targets that we discover, which could limit our ability to prevent third parties from developing drugs directed against such targets.

If we do not obtain protection under the Hatch-Waxman Act and similar legislation outside of the U.S. by extending the patent terms for our product candidates, our business may be materially harmed.

Depending upon the timing, duration and specifics of FDA marketing approval of our product candidates, if any, one or more U.S. patents may be eligible for limited patent term restoration under the Hatch-Waxman Act. The Hatch-Waxman Act permits a patent restoration term of up to five years as compensation for patent term lost during clinical testing of the product and the subsequent FDA regulatory review process. However, we may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request.

If we are unable to obtain patent term extension or restoration or the term of any such extension is less than we request, the period during which we will have the right to exclusively market our product will be shortened and our competitors may obtain approval of competing products following our patent expiration, and our revenue could be reduced, possibly materially.

We have not registered our corporate name as a trademark in all of our potential markets, and failure to secure those registrations could adversely affect our business.

Our corporate name, Xenon, has not been trademarked in each market where we operate and plan to operate. Our trademark applications for our corporate name or the name of our products may not be allowed for registration, and our registered trademarks may not be maintained or enforced. During trademark registration proceedings, we may receive rejections, which we may be unable to overcome in our responses. Third parties may also attempt to register

trademarks utilizing the Xenon name on their products, and we may not be successful in preventing such usage. In addition, in the USPTO and in comparable agencies in many foreign jurisdictions, third parties are given an opportunity to oppose pending trademark applications and to seek to cancel registered trademarks. Opposition or cancellation proceedings may be filed against our trademarks, and our trademarks may not survive such proceedings. If we do not secure registrations for our trademarks, we may encounter more difficulty in enforcing them against third parties than we otherwise would.

Intellectual property litigation may lead to unfavorable publicity that harms our reputation and causes the market price of our common shares to decline.

During the course of any intellectual property litigation, there could be public announcements of the initiation of the litigation as well as results of hearings, rulings on motions, and other interim proceedings in the litigation. If securities analysts or investors regard these announcements as negative, the perceived value of our existing products, programs or intellectual property could be diminished. Accordingly, the market price of our common shares may decline. Such announcements could also harm our reputation or the market for our future products, which could have a material adverse effect on our business.

Risks Related to Our Industry

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our current and any future products.

We face an inherent risk of product liability as a result of the clinical testing of our product candidates, and we will face an even greater risk if we commercialize any product candidates. For example, we may be sued if any of our product candidates, including any that are developed in combination therapies, allegedly causes injury or is found to be otherwise unsuitable during product testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability and a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Even successful defense would require significant financial and management resources. There is also risk that third parties we have agreed to indemnify could incur liability. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our product candidates or any resulting products;
- injury to our reputation;
- withdrawal of clinical trial participants;
- costs to defend the related litigation;
- a diversion of management's time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- the inability to commercialize our product candidates; and
- a decline in our share price.

We currently carry product liability insurance of $5,000,000 per occurrence and $5,000,000 aggregate limit. We believe our product liability insurance coverage is appropriate in light of our current clinical programs; however, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. If and when we obtain marketing approval for product candidates, we intend to expand our insurance coverage to include the sale of commercial products; however, we may then be unable to obtain product liability insurance on commercially reasonable terms or in adequate amounts. On occasion, large judgments have been awarded in class action lawsuits based on drugs or medical treatments that had unanticipated adverse effects. A successful product liability claim or series of claims brought against us could cause our common share price to decline and, if judgments exceed our insurance coverage, could adversely affect our future results of operations and business.

Patients with the diseases targeted by our product candidates are often already in severe and advanced stages of disease and have both known and unknown significant pre-existing and potentially life-threatening conditions. During the course of treatment, patients may suffer adverse events, including death, for reasons that may be related

to our product candidates. Such events could subject us to costly litigation, require us to pay substantial amounts of money to injured patients, delay, negatively impact or end our opportunity to receive or maintain regulatory approval to market those product candidates, or require us to suspend or abandon our commercialization efforts. Even in a circumstance in which we do not believe that an adverse event is related to our products, the investigation into the circumstance may be time-consuming or inconclusive. These investigations may interrupt our sales efforts, delay our regulatory approval process in other countries, or impact and limit the type of regulatory approvals our product candidates receive or maintain. As a result of these factors, a product liability claim, even if successfully defended, could have a material adverse effect on our business, financial condition or results of operations.

Our current and future relationships with customers and third-party payers in the U.S. and elsewhere will be subject, directly or indirectly, to applicable federal and state anti-kickback, fraud and abuse, false claims, transparency, health information privacy and security, and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens, and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors in the U.S. and elsewhere play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, that may constrain the business or financial arrangements and relationships through which we market, sell and distribute any products for which we obtain marketing approval. In addition, we may be subject to transparency laws and patient privacy regulation by the federal government and by the U.S. states and foreign jurisdictions in which we conduct our business. The applicable federal, state and foreign healthcare laws and regulations that may affect our ability to operate include the following:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal and state healthcare programs such as Medicare and Medicaid;
- federal civil and criminal false claims laws and civil monetary penalty laws, including the federal False Claims Act, which impose criminal and civil penalties, including civil whistleblower or *qui tam* actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, including the Medicare and Medicaid programs, or other third party payers claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- HIPAA, which imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program and making false statements relating to healthcare matters;
- HIPAA, as amended by HITECH, and their respective implementing regulations, which impose obligations on covered healthcare providers, health plans, and healthcare clearinghouses, as well as their business associates that create, receive, maintain, or transmit individually identifiable health information for or on behalf of a covered entity, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- the federal Open Payments program, created under Section 6002 of PPACA and its implementing regulations requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to HHS information related to "payments or other transfers of value" made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, and applicable manufacturers and applicable group purchasing organizations to report annually to HHS ownership and investment interests held by physicians (as defined above) and their immediate family members, with data collection required beginning August 1, 2013, reporting to the Centers for Medicare & Medicaid Services, or CMS, required by March 31, 2014 (and by the 90th day of each subsequent calendar year), and disclosure of such information to be made on a publicly available website by September 2014; and
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed

by non-governmental third-party payers, including private insurers; state and foreign laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers; state and foreign laws that require drug manufacturers to report information related to payments to physicians and other healthcare providers or marketing expenditures; and state and foreign laws governing the collection, export, privacy, use and security of biological materials and health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations may involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, including, without limitation, damages, fines, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations, which could have a material adverse effect on our business. If any of the physicians or other providers or entities with whom we expect to do business, including our collaborators, is found not to be in compliance with applicable laws, it may be subject to criminal, civil or administrative sanctions, including exclusions from participation in government healthcare programs, which could also materially affect our business.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

Our research and development activities involve the controlled use of potentially harmful biological materials as well as hazardous materials, chemicals, and various radioactive compounds typically employed in molecular and cellular biology. For example, we routinely use cells in culture and we employ small amounts of radioisotopes. We cannot completely eliminate the risk of accidental contamination or injury from the use, storage, handling, or disposal of these materials through our maintenance of up-to-date licensing and training programs. In the event of contamination or injury, we could be held liable for damages that result, and any liability could exceed our resources. We currently carry insurance covering certain claims arising from our use of these materials. However, if we are unable to maintain our insurance coverage at a reasonable cost and with adequate coverage, our insurance may not cover any liability that may arise. We are subject to U.S. and Canadian federal, provincial, and local laws and regulations governing the use, storage, handling, and disposal of these materials and specified waste products. Complying with regulations regarding the use of these materials could be costly, and if we fail to comply with these regulations, it could have a material adverse effect on our operations and profitability.

We or the third parties upon whom we depend may be adversely affected by earthquakes or other natural disasters and our business continuity and disaster recovery plans may not adequately protect us from serious disaster.

Our headquarters are located in Burnaby, British Columbia, Canada. We are vulnerable to natural disasters such as earthquakes that could disrupt our operations. If a natural disaster, power outage or other event occurred that prevented us from using all or a significant portion of our headquarters, that damaged critical infrastructure, such as the manufacturing facilities of our third-party contract manufacturers, or that otherwise disrupted operations, it may be difficult or, in certain cases, impossible for us to continue our business for a substantial period of time. We do not carry insurance for earthquakes or other natural disasters and although our business interruption insurance applies in the event of an earthquake, we may not carry sufficient business interruption insurance to compensate us for all losses that may occur. The disaster recovery and business continuity plans we have in place currently are limited and are unlikely to prove adequate in the event of a serious disaster or similar event. We may incur substantial expenses as a result of the limited nature of our disaster recovery and business continuity plans, which, particularly when taken together with our lack of earthquake insurance, could have a material adverse effect on our business. In addition, we may lose samples or other valuable data. The occurrence of any of the forgoing could have a material adverse effect on our business.

Risks Related to Our Common Shares and this Offering

Future sales of our common shares in the public market could cause our share price to fall.

Our share price could decline as a result of sales of a large number of our common shares after this offering or the perception that these sales could occur. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

Holders of approximately 6,334,582 common shares, based on our common shares outstanding as of September 30, 2014, or 46.8% of such common shares following this offering, will have rights to require us to file registration statements covering the sale of their common shares or to include their common shares in registration statements that we may file for ourselves or other shareholders described in the section of the prospectus captioned "Description of Share Capital—Registration Rights." We also intend to register the offer and sale of all common shares that we may issue under our equity compensation plans. Once we register the offer and sale of common shares for the holders of registration rights and option holders, they can be freely sold in the public market upon issuance, subject to the market stand-off and lock-up agreements described in the sections of this prospectus captioned "Shares Eligible for Future Sale—Lock-Up and Market Standoff Agreements" and "Underwriting."

In addition, in the future, we may issue additional common shares or other equity or debt securities convertible into common shares in connection with a financing, acquisition, litigation settlement, employee arrangements or otherwise. Any such issuance could result in substantial dilution to our existing shareholders and could cause our common share price to decline.

We expect that our trading price will fluctuate significantly and investors may not be able to resell their shares at or above the initial public offering price.

The trading price of our common shares following this offering may be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. As a result of this volatility, you may not be able to sell your common shares at or above the initial public offering price, if at all. The market price for our common shares may be influenced by many factors, including:

- actions by any of our collaborators regarding our product candidates they are developing, including announcements regarding clinical or regulatory decisions or developments or our collaboration;
- announcements by us or our competitors of new products, product candidates or new uses for existing products, significant contracts, commercial relationships or capital commitments and the timing of these introductions or announcements;
- unanticipated serious safety concerns related to Glybera or to the use of any of our products and product candidates;
- results from or delays of clinical trials of our product candidates;
- failure to obtain or delays in obtaining product approvals or clearances from regulatory authorities;
- adverse regulatory or reimbursement announcements;
- announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures or capital commitments;
- the results of our efforts to discover or develop additional product candidates;
- our dependence on third parties, including our collaborators, CROs, clinical trial sponsors and clinical investigators;
- regulatory or legal developments in Canada, the U.S. or other countries;
- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key scientific or management personnel;
- our ability to successfully commercialize our future product candidates we develop independently, if approved;
- the level of expenses related to any of our product candidates or clinical development programs;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- actual or anticipated quarterly variations in our financial results or those of our competitors;

- any change to the composition of the board of directors or key personnel;
- expiration of contractual lock-up agreements with our executive officers, directors and security holders;
- sales of common shares by us or our shareholders in the future, as well as the overall trading volume of our common shares;
- changes in the structure of healthcare payment systems;
- commencement of, or our involvement in, litigation;
- general economic, industry and market conditions in the pharmaceutical and biotechnology sectors and other factors that may be unrelated to our operating performance or the operating performance of our competitors, including changes in market valuations of similar companies; and
- the other factors described in this “Risk Factors” section.

In addition, the stock market in general, and NASDAQ and the biopharmaceutical industry in particular, have from time to time experienced volatility that often has been unrelated to the operating performance of the underlying companies. These broad market and industry fluctuations may adversely affect the market price of our common shares, regardless of our operating performance. In several recent situations where the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our shareholders were to bring a lawsuit against us, the defense and disposition of the lawsuit could be costly and divert the time and attention of our management and harm our operating results.

After this offering and the concurrent private placement, our executive officers, directors and principal shareholders will be able to exert significant influence over matters submitted to shareholders for approval.

Upon the closing of this offering and the concurrent private placement, our executive officers and directors and shareholders who owned more than 5% of our outstanding common shares before this offering will, in the aggregate, beneficially own shares representing approximately 42.3% of our outstanding common shares, based on our common shares outstanding as of September 30, 2014. As a result, if these shareholders were to choose to act together, they would be able to exert significant influence over matters submitted to our shareholders for approval, as well as our management and affairs. The interests of this group of shareholders may not always coincide with our corporate interests or the interests of other shareholders, and they may act in a way in which you may not agree with or in a way that may not be in the best interests of other shareholders. This concentration of voting power could delay or prevent an acquisition of our company on terms that other shareholders may desire or otherwise discourage a potential acquirer from attempting to obtain control of us, which in turn could have a material adverse effect on our share price.

Provisions in our corporate charter documents and Canadian law could make an acquisition of us, which may be beneficial to our shareholders, more difficult and may prevent attempts by our shareholders to replace or remove our current management and/or limit the market price of our common shares.

Provisions in our articles and our by-laws that will become effective immediately prior to consummation of this offering, as well as certain provisions under the Canada Business Corporations Act, or CBCA, and applicable Canadian securities laws, may discourage, delay or prevent a merger, acquisition or other change in control of us that shareholders may consider favorable, including transactions in which they might otherwise receive a premium for their common shares. These provisions could also limit the price that investors might be willing to pay in the future for our common shares, thereby depressing the market price of our common shares. In addition, because our board of directors is responsible for appointing the members of our management team, these provisions may frustrate or prevent any attempts by our shareholders to replace or remove our current management by making it more difficult for shareholders to replace members of our board of directors. Among other things, these provisions include the following:

- shareholders cannot amend our articles unless such amendment is approved by shareholders holding at least two-thirds of the shares entitled to vote on such approval;
- our board of directors may, without shareholder approval, issue preferred shares having any terms, conditions, rights, preferences and privileges as the board of directors may determine; and
- shareholders must give advance notice to nominate directors or to submit proposals for consideration at shareholders’ meetings.

Any provision in our articles, by-laws, under the CBCA or under any applicable Canadian securities law that has the effect of delaying or deterring a change in control could limit the opportunity for our shareholders to receive a premium for their common shares, and could also affect the price that some investors are willing to pay for our common shares.

U.S. civil liabilities may not be enforceable against us, our directors, our officers or certain experts named in this prospectus.

We are governed by the CBCA and our principal place of business is in Canada. Many of our directors and officers, as well as certain experts named herein, reside outside of the U.S., and all or a substantial portion of their assets as well as all or a substantial portion of our assets are located outside the U.S. As a result, it may be difficult for investors to effect service of process within the U.S. upon us and such directors, officers and experts or to enforce judgments obtained against us or such persons, in U.S. courts, in any action, including actions predicated upon the civil liability provisions of U.S. federal securities laws or any other laws of the U.S. Additionally, rights predicated solely upon civil liability provisions of U.S. federal securities laws or any other laws of the U.S. may not be enforceable in original actions, or actions to enforce judgments obtained in U.S. courts, brought in Canadian courts, including courts in the Province of British Columbia.

We are governed by the corporate laws of Canada which in some cases have a different effect on shareholders than the corporate laws of Delaware, U.S.

We are governed by the CBCA and other relevant laws, which may affect the rights of shareholders differently than those of a company governed by the laws of a U.S. jurisdiction, and may, together with our charter documents, have the effect of delaying, deferring or discouraging another party from acquiring control of our company by means of a tender offer, a proxy contest or otherwise, or may affect the price an acquiring party would be willing to offer in such an instance. The material differences between the CBCA and Delaware General Corporation Law, or DGCL, that may have the greatest such effect include, but are not limited to, the following: (i) for material corporate transactions (such as mergers and amalgamations, other extraordinary corporate transactions or amendments to our articles) the CBCA generally requires a two-thirds majority vote by shareholders, whereas DGCL generally only requires a majority vote; and (ii) under the CBCA a holder of 5% or more of our common shares can requisition a special meeting of shareholders, whereas such right does not exist under the DGCL. Refer to the heading titled “Material Differences between the Canada Business Corporations Act and Delaware General Corporation Law” for more information.

We do not know whether an active and liquid trading market will develop for our common shares or what the market price of our common shares will be and as a result it may be difficult for you to sell your common shares.

Prior to this offering, there has been no public market for our common shares. An active trading market for our shares may never develop or be sustained following this offering on The NASDAQ Global Market, on which we have applied to list our common shares, or otherwise. If an active market for our common shares does not develop, it may be difficult for you to sell common shares you purchase in this offering without depressing the market price for the common shares or you may not be able to sell your shares at all. The initial public offering price for our common shares will be determined through negotiations with the underwriters and the negotiated price may not be indicative of the market price for our common shares after this offering. The initial public offering price may vary from the market price of our common shares after the offering. As a result of these and other factors, you may not be able to sell your common shares at or above the initial public offering price or at all. Further, an inactive market may also impair our ability to raise capital by selling additional common shares and may impair our ability to enter into strategic collaborations or acquire companies or products by using our common shares as consideration.

Complying with the laws and regulations affecting public companies will increase our costs and the demands on management and could harm our operating results and our ability to accurately report our financial condition, results of operations or cash flows, which may adversely affect investor confidence in us and, as a result, the value of our common shares.

As a public company, and particularly after we cease to be an “emerging growth company,” we will incur significant legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and the related rules and regulations subsequently implemented by the Securities and Exchange Commission, or SEC, the applicable Canadian securities regulators and NASDAQ impose numerous requirements on public companies, including requiring changes in corporate governance practices. Also, the Securities Exchange Act of 1934, as amended, or the Exchange Act, requires, among other things, that we file annual, quarterly and current reports with respect to our business and operating results. In addition, we have

recently hired Ian Mortimer as our full-time chief financial officer. We anticipate that we may need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge to address the added burdens of operating as a public company. Our management and other personnel will need to devote a substantial amount of time to compliance with these laws and regulations. These requirements have increased and will continue to increase our legal, accounting, and financial compliance costs and have made and will continue to make some activities more time-consuming and costly. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to accept reduced policy limits and coverage or to incur substantial costs to maintain the same or similar coverage. These rules and regulations could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors or our board committees or as executive officers.

The Sarbanes-Oxley Act requires, among other things, that we assess the effectiveness of our internal control over financial reporting annually and the effectiveness of our disclosure controls and procedures quarterly. In particular, commencing with our second annual report on Form 10-K, Section 404 of the Sarbanes-Oxley Act, or Section 404, will require us to perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on, and our independent registered public accounting firm potentially to attest to, the effectiveness of our internal control over financial reporting. As an “emerging growth company” we expect to avail ourselves of the exemption from the requirement that our independent registered public accounting firm attest to the effectiveness of our internal control over financial reporting under Section 404. However, we may no longer avail ourselves of this exemption when we cease to be an “emerging growth company.” When our independent registered public accounting firm is required to undertake an assessment of our internal control over financial reporting, the cost of our compliance with Section 404 will correspondingly increase. Our compliance with applicable provisions of Section 404 will require that we incur substantial accounting expense and expend significant management time on compliance-related issues as we implement additional corporate governance practices and comply with reporting requirements. Moreover, if we are not able to comply with the requirements of Section 404 applicable to us in a timely manner, or if we or our independent registered public accounting firm identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our common shares could decline and we could be subject to sanctions or investigations by the SEC or other regulatory authorities, which would require additional financial and management resources.

Furthermore, investor perceptions of our company may suffer if deficiencies are found, and this could cause a decline in the market price of our common shares. Irrespective of compliance with Section 404, any failure of our internal control over financial reporting could have a material adverse effect on our stated operating results and harm our reputation. If we are unable to implement these requirements effectively or efficiently, it could harm our operations, financial reporting, or financial results and could result in an adverse opinion on our internal controls from our independent registered public accounting firm.

We are an “emerging growth company,” and any decision on our part to comply only with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make our common shares less attractive to investors.

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For as long as we continue to be an “emerging growth company,” we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies that are not “emerging growth companies,” including, but not limited to, not being required to have our independent registered public accounting firm audit our internal control over financial reporting under Section 404, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. We could be an “emerging growth company” for up to five years following the completion of this offering, although, if we have more than $1.0 billion in annual revenue, if the market value of our common shares held by non-affiliates exceeds $700 million as of June 30 of any year, or we issue more than $1.0 billion of non-convertible debt over a three-year period before the end of that five-year period, we would cease to be an “emerging growth company” as of the following December 31. Investors could find our common shares less attractive if we choose to rely on these exemptions. If some investors find our common shares less attractive as a result of any choices to reduce future disclosure, there may be a less active trading market for our common shares and our share price may be more volatile.

As an “emerging growth company,” the JOBS Act allows us to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. However, we are choosing to “opt out” of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, shareholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our common shares.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404 or any subsequent testing by our independent registered public accounting firm, may reveal deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our financial statements or identify other areas for further attention or improvement. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common shares.

We will be required to disclose changes made in our internal controls and procedures on a quarterly basis and our management will be required to assess the effectiveness of these controls annually. However, for as long as we are an “emerging growth company” under the JOBS Act, our independent registered public accounting firm will not be required to attest to the effectiveness of our internal controls over financial reporting pursuant to Section 404. We could be an “emerging growth company” for up to five years. An independent assessment of the effectiveness of our internal controls could detect problems that our management’s assessment might not. In addition, our management and independent registered public accounting firm did not perform an evaluation of our internal control over financial reporting as of December 31, 2013, December 31, 2012 or December 31, 2011, in accordance with the provisions of the Sarbanes-Oxley Act. Had we and our independent registered public accounting firm performed such an evaluation, control deficiencies may have been identified by management or our independent registered public accounting firm, and those control deficiencies could have also represented one or more material weaknesses. Undetected material weaknesses in our internal controls could lead to financial statement restatements and require us to incur the expense of remediation.

If you purchase our common shares in this offering, future sales and issuances of our common shares or rights to purchase common shares, including pursuant to our equity incentive plans, could cause you to incur dilution and could cause our share price to fall.

As of June 30, 2014, options to purchase 1,442,741 of our common shares with a weighted-average exercise price of $4.37 per common share were outstanding. The exercise of any of these options would result in dilution to investors purchasing shares in this offering. Further, because we will need to raise additional capital to fund our clinical development programs, we may in the future sell substantial amounts of common shares or securities convertible into or exchangeable for common shares. Pursuant to our equity incentive plan(s), our compensation committee (or a subset thereof) is authorized to grant equity-based incentive awards to our employees, directors and consultants. Future option grants and issuances of common shares under our share-based compensation plans may have an adverse effect on the market price of our common shares.

These future issuances of common shares or common share-related securities, together with the exercise of outstanding options and any additional common shares issued in connection with acquisitions, if any, may result in further dilution to our existing shareholders, and new investors could gain rights, preferences and privileges senior to those of holders of our common shares, including common shares sold in this offering.

Our management team will have broad discretion to use the net proceeds from this offering and the concurrent private placement and its investment of these proceeds may not yield a favorable return. They may invest the proceeds of this offering and the concurrent private placement in ways with which investors disagree.

Our management team will have broad discretion in the application of the net proceeds from this offering and the concurrent private placement and could spend or invest the proceeds in ways with which our shareholders disagree. Accordingly, investors will need to rely on our management team's judgment with respect to the use of these proceeds. We intend to use the proceeds from this offering to: (1) fund preclinical and early clinical development of our DS and XEN801 programs; (2) genetic research and drug discovery activities using our Extreme Genetics discovery platform; and (3) for working capital and other general corporate purposes. We may also use a portion of the net proceeds to acquire, license and invest in complementary products, technologies or businesses; however, we currently have no agreements or commitments to complete any such transaction. These uses may not yield a favorable return to our shareholders.

We cannot specify with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering and the concurrent private placement. In addition, the amount, allocation and timing of our actual expenditures will depend upon numerous factors, including milestone payments received from our collaborations and royalties received on sale of our approved product and any future approved product. Accordingly, we will have broad discretion in using these proceeds. Until the net proceeds are used, they may be placed in investments that do not produce significant income or that may lose value.

We are at risk of securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biotechnology companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

We do not anticipate paying any cash dividends on our common shares in the foreseeable future.

We do not currently intend to pay any cash dividends on our common shares in the foreseeable future. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common shares may be investors' sole source of gain for the foreseeable future.

NASDAQ may delist our securities from its exchange, which could limit investors' ability to make transactions in our securities and subject us to additional trading restrictions.

We have applied to list our common shares on The NASDAQ Global Market under the trading symbol "XENE." In order to make a final determination of compliance with their listing criteria, NASDAQ may look to the first trading day's activity and, particularly, the last bid price on such day. In the event the trading price for our common shares drops below NASDAQ's $1.00 minimum bid requirement, NASDAQ could rescind our initial listing approval. If that were to happen, the liquidity for our common shares would decrease. If we failed to list the common shares on NASDAQ, the liquidity for our common shares would be significantly impaired, which may substantially decrease the trading price of our common shares.

In addition, in the future, our securities may fail to meet the continued listing requirements to be listed on NASDAQ. If NASDAQ delists our common shares from trading on its exchange, we could face significant material adverse consequences, including:

- a limited availability of market quotations for our securities;
- a determination that our common shares is a "penny stock" which will require brokers trading in our common shares to adhere to more stringent rules and possibly resulting in a reduced level of trading activity in the secondary trading market for our common shares;
- a limited amount of news and analyst coverage for our company; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

If securities or industry analysts do not publish research reports about our business, or if they issue an adverse opinion about our business, our share price and trading volume could decline.

The trading market for our common shares will be influenced by the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts do not currently, and may never, publish research on our company. If no or too few securities or industry analysts commence coverage of our company, the trading price for our common shares would likely be negatively impacted. In the event securities or industry analysts initiate coverage, if one or more of the analysts who cover us downgrade our common shares or publish inaccurate or unfavorable research about our business, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, demand for our common shares could decrease, which might cause our price and trading volume to decline.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that are based on management's beliefs and assumptions and on information currently available to management. Some of the statements under "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business" and elsewhere in this prospectus contain forward-looking statements. In some cases, you can identify forward-looking statements by the following words: "may," "will," "could," "would," "should," "expect," "intend," "plan," "anticipate," "believe," "estimate," "predict," "project," "potential," "continue," "ongoing" or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words.

These statements involve risks, uncertainties and other factors that may cause actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on a combination of facts and factors currently known by us and our projections of the future, about which we cannot be certain. Forward-looking statements in this prospectus include, but are not limited to, statements about:

- our ability to identify additional products or product candidates using our Extreme Genetics discovery platform;
- the initiation, timing, cost, progress and success of our research and development programs, preclinical studies and clinical trials;
- our ability to advance product candidates into, and successfully complete, clinical trials;
- our ability to recruit sufficient numbers of patients for our future clinical trials for orphan or more common indications;
- our ability to achieve profitability;
- our ability to obtain funding for our operations, including research funding;
- our ability to receive milestones, royalties and sublicensing fees under our collaborations, and the timing of such payments;
- the implementation of our business model and strategic plans;
- our ability to develop and commercialize product candidates for orphan and niche indications independently;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our ability to find families to support our Extreme Genetics discovery platform;
- our ability to discover genes and drug targets;
- our ability to protect our intellectual property and operate our business without infringing upon the intellectual property rights of others;
- our expectations regarding federal, state and foreign regulatory requirements;
- the therapeutic benefits, effectiveness and safety of our product candidates;
- the accuracy of our estimates of the size and characteristics of the markets that may be addressed by our products and product candidates;
- the rate and degree of market acceptance and clinical utility of Glybera and future products, if any;
- the timing of and our and our collaborators' ability to obtain and maintain regulatory approvals for our product candidates;
- the likelihood of our exercise of our option to co-promote TV-45070 in the U.S. under our Teva collaboration and co-fund and co-develop under our Merck collaboration;
- our ability to maintain and establish collaborations;
- our use of proceeds from this offering and the concurrent private placement;
- our expectations regarding market risk, including interest rate changes and foreign currency fluctuations;
- our belief in the sufficiency of our cash flows to meet our needs for at least the next 12 to 24 months;

- our expectations regarding the timing during which we will be an emerging growth company under the JOBS Act;
- our ability to engage and retain the employees required to grow our business;
- our future financial performance and projected expenditures;
- developments relating to our competitors and our industry, including the success of competing therapies that are or become available; and
- estimates of our expenses, future revenue, capital requirements and our needs for additional financing.

In addition, you should refer to the “Risk Factors” section of this prospectus for a discussion of other important factors that may cause actual results to differ materially from those expressed or implied by the forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if the forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. The Private Securities Litigation Reform Act of 1995 and Section 27A of the Securities Act of 1933, as amended, do not protect any forward-looking statements that we make in connection with this offering.

MARKET, INDUSTRY AND OTHER DATA

Unless otherwise indicated, information contained in this prospectus concerning our industry and the market in which we operate, including our market position, market opportunity and market size, is based on information from various sources such as industry publications, on assumptions that we have made based on such data and other similar sources and on our knowledge of the markets for our products. These data involve a number of assumptions and limitations. We have not independently verified any third-party information.

In addition, projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate is necessarily subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section entitled “Risk Factors” and elsewhere in this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

USE OF PROCEEDS

We estimate that the net proceeds to us from the sale of the common shares in this offering and the concurrent private placement will be approximately $41.3 million, or approximately $47.4 million if the underwriters exercise in full their option to purchase additional common shares, based upon an assumed initial public offering price of $11.00 per common share (the midpoint of the price range set forth on the cover page of this prospectus) and after deducting estimated underwriting discounts and commissions, estimated fees payable in connection with the concurrent private placement and estimated offering expenses payable by us. Each $1.00 increase (decrease) in the assumed initial public offering price of $11.00 per common share would increase (decrease) the net proceeds to us from this offering by approximately $3.7 million, assuming the number of common shares offered by us, as set forth on the cover page of this prospectus, remains the same. We may also increase or decrease the number of common shares we are offering. Each increase (decrease) of 500,000 common shares in the number of shares offered by us would increase (decrease) the net proceeds to us from this offering by approximately $5.1 million, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We do not expect that a change in the initial public offering price or the number of common shares by these amounts would have a material effect on our use of the proceeds from this offering, although it may accelerate the time at which we will need to seek additional capital.

We currently expect to use the net proceeds from this offering and the concurrent private placement as follows:

- approximately $17.0 million for preclinical and early clinical development of our Dravet Syndrome and XEN801 programs;
- approximately $11.0 million to fund genetic research and drug discovery activities using our Extreme Genetics discovery platform; and
- the remainder for working capital and general corporate purposes.

We may also use a portion of the net proceeds in connection with any exercise of co-development or co-promotion rights under our collaborations; however, no such rights are currently exercisable. In addition, we may also use a portion of the net proceeds to acquire, license and invest in complementary products, technologies or businesses; however, we currently have no agreements or commitments to complete any such transaction.

This expected use of the net proceeds of this offering and the concurrent private placement represents our intentions based on our current plans and business conditions, which could change in the future as our plans and business conditions evolve. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering or the amounts that we will actually spend on the uses set forth above. The amounts, allocation and timing of our actual expenditures will depend upon numerous factors, including:

- the focus and results of our research, drug discovery and preclinical development activities;
- the type, number, costs and results of any clinical trials for our product candidates;
- regulatory actions relating to our product candidates;
- our ability to achieve milestones and obtain royalty payments from our collaborators;
- whether any co-funding or co-promotion rights under our strategic alliances are exercised;
- competitive and technological developments; and
- the rate of growth, if any, of our business.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common shares or any other securities. We currently anticipate that we will retain all available funds and any future earnings, if any, in the foreseeable future for use in the operation of our business and do not currently anticipate paying cash dividends in the foreseeable future. Payment of future cash dividends, if any, will be at the discretion of the board of directors, subject to applicable law and will depend on various factors, including our financial condition, operating results, current and anticipated cash needs, the requirements of current or then-existing debt instruments and other factors the board of directors deems relevant.

CAPITALIZATION

The following table summarizes our capitalization as of June 30, 2014:

- on an actual basis;
- on a pro forma basis to reflect (1) the conversion of all outstanding preferred shares into an aggregate of 7,725,924 common shares upon the closing of this offering including the conversion of all of our outstanding Series A preferred shares and Series B preferred shares into 2,146,353 common shares and the conversion of all of our outstanding Series E preferred shares into 5,579,571 common shares, based on an assumed initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) and the adjustment provisions relating to our Series E preferred shares described in the section titled “Description of Share Capital”; (2) the automatic conversion of all subscription rights outstanding upon the closing of this offering into an aggregate of 10,660 common shares; and (3) a 1 for 4.86 reverse share split of our common and preferred shares effected on October 1, 2014; and
- on a pro forma as adjusted basis, to further reflect (i) the issuance and sale by us of 454,545 common shares in the concurrent private placement to an affiliate of Genentech assuming an initial public offering price of $11.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated fees payable in connection with the concurrent private placement, and (ii) the sale and issuance by us of 4,000,000 common shares in this offering at an assumed initial public offering price of $11.00 per common share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Investors should read the information in this table together with the financial statements and related notes to those statements, as well as the sections of this prospectus captioned “Selected Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

	AS OF JUNE 30, 2014		
	ACTUAL	PRO FORMA	PRO FORMA AS ADJUSTED [1]
		(unaudited) (in thousands)	
Redeemable convertible preferred shares, without par value; issuable in series, 6,619,483 authorized, 6,468,479 preferred shares issued and outstanding, actual; no preferred shares authorized, issued or outstanding, pro forma; no preferred shares authorized, issued or outstanding, pro forma as adjusted	$ 102,488	$ —	$ —
Shareholders’ deficit:			
Preferred shares, without par value, no shares authorized, issued or outstanding, actual; unlimited shares authorized, no shares issued or outstanding, pro forma; unlimited shares authorized, no shares issued or outstanding, pro forma as adjusted	—	—	—
Common shares, without par value, unlimited common shares authorized, 1,348,103 common shares issued and outstanding, actual; unlimited common shares authorized, 9,084,687 common shares issued and outstanding, pro forma; unlimited common shares authorized, 13,539,232 common shares issued and outstanding, pro forma as adjusted	6,182	108,782	150,052
Additional paid-in capital	30,064	29,952	29,952
Accumulated deficit	(114,149)	(114,149)	(114,149)
Accumulated comprehensive income	2,521	2,521	2,521
Total shareholders’ (deficit) equity	(75,382)	27,106	68,376
Total capitalization	$ 27,106	$ 27,106	$ 68,376

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $11.00 per common share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) each of additional paid-in capital, total shareholders' deficit and total capitalization by approximately $3.7 million, assuming that the number of common shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of common shares we are offering. Each increase (decrease) of 500,000 common shares in the number of shares offered by us would increase (decrease) each of additional paid-in capital, total shareholders' deficit and total capitalization by approximately $5.1 million, assuming that the assumed initial public offering price remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will adjust based on the actual initial public offering price and other terms of this offering determined at pricing.

The outstanding share information in the table above excludes, as of June 30, 2014:

- 1,442,741 common shares issuable upon exercise of options outstanding as of June 30, 2014, with a weighted-average exercise price of CAD$4.66 per common share, or $4.37 per common share, as converted; and
- 411,522 common shares reserved for future issuance under our 2014 Equity Incentive Plan, as amended, which will become effective on the business day immediately prior to the date of effectiveness of the registration statement of which this prospectus forms a part, and any future automatic increase in common shares reserved for issuance under such plan.

DILUTION

Investors purchasing our common shares in this offering will experience immediate and substantial dilution in the pro forma net tangible book value of their common shares. Dilution in pro forma net tangible book value represents the difference between the price to public per common share and the pro forma net tangible book value per share immediately after the offering.

The historical net tangible book value of our common shares as of June 30, 2014 was $27.1 million, or $20.11 per common share. Historical net tangible book value (deficit) per common share represents our total tangible assets (total assets less intangible assets) less total liabilities divided by the number of outstanding common shares.

After giving effect to (1) the automatic conversion of the outstanding preferred shares into an aggregate of 7,725,924 common shares upon the closing of this offering assuming an initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus); (2) the automatic conversion into an aggregate of 10,660 common shares of all subscription rights outstanding upon the closing of this offering; (3) the issuance of 4,000,000 common shares in this offering and 454,545 common shares in the concurrent private assuming an initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus); (4) receipt of the net proceeds from the sale of 4,000,000 common shares in this offering based upon an assumed initial public offering price of $11.00 per common share (the midpoint of the price range set forth on the cover page of this prospectus), after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, the pro forma as adjusted net tangible book value as of June 30, 2014 would have been approximately $68.4 million, or $5.05 per common share; and (5) receipt of the net proceeds from the sale of $5.0 million of our common shares in the concurrent private placement, after deducting estimated fees payable in connection with the concurrent private placement. This represents an immediate increase in pro forma as adjusted net tangible book value of $2.07 per common share to existing shareholders and an immediate dilution of $5.95 per common share to new investors purchasing common shares in this offering.

The following table illustrates this dilution on a per common share basis to new investors:

Assumed initial price to public per common share		$11.00
Historical net tangible book value per common share as of June 30, 2014	$ 20.11	
Decrease per common share attributable to conversion of redeemable convertible preferred shares	(17.10)	
Decrease per common share attributable to the conversion of subscription rights	(0.02)	
Pro forma net tangible book deficit per common share before this offering	2.98	
Increase in net tangible book value per common share attributable to investors participating in this offering	2.07	
Pro forma as adjusted net tangible book value per common share, as adjusted to give effect to this offering		5.05
Pro forma dilution per common share to investors participating in this offering		$ 5.95

Each $1.00 increase (decrease) in the assumed initial public offering price of $11.00 per common share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease) the pro forma as adjusted net tangible book value by approximately $3.7 million, or approximately $0.27 per common share, and increase (decrease) the pro forma dilution per share to investors in this offering by approximately $0.73 per common share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of common shares we are offering. An increase of 500,000 common shares in the number of shares offered by us would increase the pro forma as adjusted net tangible book value by approximately $5.1 million, or $0.18 per common share, and the pro forma dilution per common share to investors in this offering would be $5.77 per common share, assuming that the assumed initial public offering price remains the same, and after deducting estimated underwriting discounts and commissions and

estimated offering expenses payable by us. Similarly, a decrease of 500,000 common shares in the number of common shares offered by us would decrease the pro forma as adjusted net tangible book value by approximately $5.1 million, or $0.20 per common share, and the pro forma dilution per common share to investors in this offering would be $6.15 per common share, assuming that the assumed initial public offering price remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will adjust based on the actual initial public offering price and other terms of this offering determined at pricing.

If the underwriters exercise their option in full to purchase 600,000 additional common shares in this offering, the pro forma as adjusted net tangible book value per common share after the offering would be $5.27 per common share, the increase in the pro forma net tangible book value per common share to existing shareholders would be $0.22 per common share and the pro forma dilution to new investors purchasing common shares in this offering would be $5.73 per common share.

The following table summarizes, on a pro forma basis as of June 30, 2014, the differences between the number of common shares purchased from us, the total consideration and the weighted-average price per share paid by existing shareholders and by investors participating in this offering and the concurrent private placement at an assumed initial public offering price of $11.00 per share, before deducting estimated underwriting discounts and commissions, estimated fees payable in connection with the concurrent private placement and estimated offering expenses payable by us.

	COMMON SHARES PURCHASED		TOTAL CONSIDERATION		WEIGHTED-AVERAGE PRICE PER COMMON SHARE
	NUMBER	PERCENT	AMOUNT	PERCENT	
Existing shareholders before this offering and the concurrent private placement	9,084,687	67.1%	$108,782,000	68.9%	$ 11.97
Investors participating in this offering and the concurrent private placement	4,454,545	32.9	49,000,000	31.1	11.00
Total	13,539,232	100.0%	$157,782,000	100.0%	

Each $1.00 increase (decrease) in the assumed initial public offering price of $11.00 per common share (the midpoint of the price range set forth on the cover page of this prospectus) would increase (decrease) total consideration paid by new investors by approximately $3.7 million, assuming that the number of common shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 500,000 common shares in the number of common shares offered by us would increase (decrease) total consideration paid by new investors by $5.1 million, assuming that the assumed initial public offering price remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The number of common shares to be outstanding following this offering is based on 9,084,687 common shares outstanding as of June 30, 2014, after giving effect to (i) the conversion of all outstanding convertible preferred shares into an aggregate of 7,725,924 common shares upon the closing of this offering, assuming an initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus), (ii) the conversion of all outstanding subscription rights into an aggregate of 51,810 common shares upon the closing of this offering, and (iii) a 1 for 4.86 reverse share split effected on October 1, 2014. The outstanding share information in the table above excludes, as of June 30, 2014:

- 1,442,741 common shares issuable upon exercise of options outstanding as of June 30, 2014, with a weighted-average exercise price of CAD$4.66 per common share, or $4.37 per common share, as converted; and

- 411,522 common shares reserved for future issuance under our 2014 Equity Incentive Plan, as amended, which will become effective on the business day immediately prior to the effective date of the registration statement of which this prospectus forms a part, and any future automatic increase in common shares reserved for issuance under such plan.

Share reserves for our share-based compensation plans will also be subject to automatic annual increase in accordance with the terms of the plans. To the extent that new options are issued under our share-based compensation plans or we issue additional common shares in the future, there will be further dilution to investors participating in this offering.

SELECTED FINANCIAL DATA

We derived the selected statement of operations data for the fiscal years ended December 31, 2011, 2012 and 2013 and the balance sheet data as of December 31, 2012 and 2013 from our audited financial statements included elsewhere in this prospectus. The selected statement of operations data for the six months ended June 30, 2013 and 2014 and the balance sheet data as of June 30, 2014 have been derived from unaudited interim financial statements included elsewhere in this prospectus and have been prepared on the same basis as the audited financial statements. In the opinion of management, the unaudited data reflects all adjustments, which include only normal and recurring adjustments, necessary for a fair presentation of the results as of and for the periods. The balance sheet data as of December 31, 2011 have been derived from audited financial statements which are not included in this prospectus. Our historical results are not necessarily indicative of results to be expected in any future period and results for the six months ended June 30, 2014 are not necessarily indicative of results to be expected for the full year ending December 31, 2014. You should read the following selected financial data below in conjunction with our financial statements and related notes included elsewhere in this prospectus and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this prospectus. Our audited annual financial statements have been prepared in U.S. dollars and in accordance with U.S. Generally Accepted Accounting Principles.

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	2011	2012	2013	2013	2014
				(unaudited)	
	(in thousands, except per share data)				
Statement of Operations Data:					
Revenue:					
Collaboration revenue	$ 6,915	$ 14,300	$ 27,352	$ 10,985	$ 10,297
Royalties	3	8	4	—	2
	6,918	14,308	27,356	10,985	10,299
Operating expenses:					
Research and development	12,302	10,455	12,303	6,983	5,099
General and administrative	6,730	7,006	5,341	2,828	2,790
Total operating expenses	19,032	17,461	17,644	9,811	7,889
Income (loss) from operations	(12,114)	(3,153)	9,712	1,174	2,410
Other income (expense):					
Interest income	153	144	338	76	278
Interest expense	(91)	(93)	(64)	(41)	—
Foreign exchange gain (loss)	60	(169)	2,035	1,920	(85)
Gain (loss) on write-off and disposal of assets	—	(1,030)	11	11	—
Net income (loss)	(11,992)	(4,301)	12,032	3,140	2,603
Net income (loss) attributable to participating securities	—	—	8,199	3,140	2,603
Net income (loss) attributable to common shareholders	$ (11,992)	$ (4,301)	$ 3,833	$ —	$ —
Net income (loss) per share—basic [1]	$ (9.06)	$ (3.24)	$ 2.87	$ 0.00	$ 0.00
Net income (loss) per share—diluted [1]	$ (9.06)	$ (3.24)	$ 1.91	$ 0.00	$ 0.00
Weighted-average common shares outstanding used in computing basic net income (loss) per share [1]	1,324	1,327	1,338	1,333	1,347
Weighted-average common shares outstanding used in computing diluted net income (loss) per share [1]	1,324	1,327	2,009	1,333	1,347
Pro forma net income per share—basic (unaudited) [2]			$ 1.33		$ 0.29
Pro forma net income per share—diluted (unaudited) [2]			$ 1.24		$ 0.26
Weighted-average common shares outstanding used in computing the proforma net income per share—basic (unaudited) [2]			9,076		9,085
Weighted-average common shares outstanding used in computing the proforma net income per share—diluted (unaudited) [2]			9,735		9,828

	AS OF DECEMBER 31,			AS OF JUNE 30
	2011	2012	2013	2014 (unaudited)
	(in thousands)			
Balance Sheet Data:				
Cash, cash equivalents and marketable securities	$ 14,924	$ 60,162	$ 49,276	$ 44,710
Working capital	20,536	41,507	31,666	27,977
Total assets	30,465	63,305	54,487	50,712
Note payable	1,586	1,665	—	—
Redeemable convertible preferred shares	102,488	102,488	102,488	102,488
Total shareholders' deficit	(86,316)	(89,865)	(78,372)	(75,382)

(1) See Note 2 to our financial statements appearing elsewhere in this prospectus for an explanation of the method used to calculate basic and diluted net income (loss) per common share and the weighted-average number of common shares used in computation of the per common share amounts.

(2) Pro forma net income (loss) per share represents net income (loss) divided by the pro forma weighted-average shares outstanding, and reflects (i) the conversion of all outstanding preferred shares into an aggregate of 7,725,924 common shares, including the conversion of all of our outstanding Series A preferred shares and Series B preferred shares into 2,146,353 common shares and the conversion of all of our Series E preferred shares into 5,579,571 common shares, based upon an assumed initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) and the adjustment provisions relating to our outstanding Series E preferred shares described in "Description of Share Capital," upon the closing of this offering, and (ii) the conversion of the weighted-average number of outstanding subscription rights for the period into an aggregate of 11,955 common shares.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with our financial statements and related notes appearing in this prospectus. Some of the information contained in this discussion and analysis or set forth in other parts of this prospectus, including information with respect to our plans and strategy for our business, includes forward-looking statements that involve risks and uncertainties. You should read the "Risk Factors" section of this prospectus for a discussion of important factors that could cause actual results to differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical-stage biopharmaceutical company discovering and developing a pipeline of differentiated therapeutics for orphan indications that we intend to commercialize on our own, and for larger market indications that we intend to partner with global pharmaceutical companies. We have built a core enabling discovery platform for the discovery of validated drug targets by studying rare human diseases with extreme traits, including diseases caused by mutations in ion channels, known as channelopathies. We have an integrated platform that includes in-house capabilities for human genetics, small molecule drug discovery, and preclinical and clinical development.

Our business was founded on our proprietary discovery platform, which we refer to as Extreme Genetics. Extreme Genetics involves the study of families where individuals exhibit inherited severe traits, or phenotypes. By identifying and characterizing single-gene defects responsible for these phenotypes, we gain insights into human disease biology to better select targets for therapeutic intervention. Our Extreme Genetics discovery platform has yielded the first approved gene therapy product in the European Union, or the EU, a broad development pipeline and multiple pharmaceutical partnerships.

Our pharmaceutical partners include Teva Pharmaceutical Industries, Ltd., or Teva (through its subsidiary, Ivax International GmbH), Genentech, Inc., or Genentech, and Merck & Co., Inc., or Merck (through its affiliate, Essex Chemie AG). Our pharmaceutical collaborations have generated in aggregate over $140.0 million in non-equity funding to date with the potential to provide us with over $1.0 billion in future milestone payments, as well as royalties and co-promotion income on product sales.

To date, our Extreme Genetics discovery platform has yielded:

- Glybera, developed by our licensee uniQure Biopharma B.V., or uniQure, the first, and currently the only, gene therapy approved in the EU for the treatment of the orphan disorder lipoprotein lipase deficiency, or LPLD;
- TV-45070 (formerly XEN402), a product candidate with four Phase 2 proof-of-concept clinical trials completed. Our partner Teva is conducting a 300-patient, randomized Phase 2b clinical trial in osteoarthritis, or OA, of the knee and is planning clinical development in neuropathic pain indications, including postherpetic neuralgia, or PHN;
- GDC-0276, a product candidate being developed in collaboration with Genentech for the treatment of pain. In September 2014, Genentech initiated a Phase 1 clinical trial for GDC-0276; and
- preclinical programs, including a sodium channel inhibitor for the orphan disorder Dravet Syndrome, or DS, and XEN801, a stearoyl Co-A desaturase, or SCD1, inhibitor for the treatment of acne. We anticipate filing an investigational new drug application, or IND, for XEN801 in the first half of 2015 and an IND for our DS program in 2016.

We believe that our Extreme Genetics discovery platform enhances the likelihood of discovering a drug target that has a major effect in humans. From these discoveries, we can gain an improved understanding of how a drug that modulates the target might act when given to a human.

We have funded our operations primarily through payments received from our pharmaceutical collaborators and government funding as well as through the sale of convertible preferred shares in various financing transactions. Through June 30, 2014, we have received an aggregate of approximately $265.2 million to fund our operations, of

which approximately $145.7 million was non-equity funding pursuant to collaboration and license agreements, approximately $17.0 million was pursuant to government funding, and approximately $102.5 million was pursuant to the sale of our preferred shares. For 2011, 2012, 2013 and the six months ended June 30, 2014, we recognized revenue for an aggregate of approximately $6.9 million, $14.3 million, $27.4 million and $10.3 million, respectively, consisting primarily of funding from our collaborators.

Though our revenue from our collaboration and license agreements has resulted in net income of $2.6 million for the six months ended June 30, 2014 and net income of $12.0 million for the year ended December 31, 2013, we have incurred net losses on an annual basis since inception and do not expect to have sustained profitability for the foreseeable future. We had net losses of $12.0 million and $4.3 million for the years ended December 31, 2011 and 2012, respectively, and had an accumulated deficit of $114.1 million as of June 30, 2014, from expenses incurred in connection with our research programs and from general and administrative costs associated with our operations.

We have not generated any royalty revenue or other revenue from product sales, and we expect that our revenue in the near term will be substantially dependent on our collaboration agreements. Given the uncertain nature of clinical development of our current and future product candidates and the commercialization of current and future products, we cannot predict when or whether we will receive further milestone payments under our current or future collaboration agreements or whether we will be able to report either revenue or net income in future years.

We expect to continue to incur significant expenses and operating losses for at least the next 12 to 24 months. We anticipate that our expenses will increase substantially as we:

- continue our research and preclinical and clinical development of our product candidates;
- seek regulatory and marketing approvals for any of our product candidates that successfully complete clinical trials;
- make milestone and other payments under our in-license agreements;
- maintain, protect and expand our intellectual property portfolio;
- attract, hire and retain skilled personnel; and
- create additional infrastructure to support our operations as a public company and otherwise.

Financial Operations Overview

Revenue

To date, our revenue has been primarily derived from collaboration and licensing agreements as well as, to a lesser extent, government funding. In addition, we have received nominal royalties from a diagnostic license. To date, we have not generated any royalty revenue from product sales, and do not otherwise anticipate generating revenue from product sales other than from sales of Glybera under our license to uniQure for the foreseeable future, if ever. We have entered into several collaboration agreements, the most significant of which, with respect to revenue, are described below.

uniQure. Effective August 2000, we entered into a sublicense and research agreement with uniQure (formerly Amsterdam Molecular Therapeutics), pursuant to which we granted to uniQure an exclusive, worldwide sublicense under certain intellectual property controlled by us to develop and commercialize technology and compounds related to the variant of lipoprotein lipase, or LPL, called LPL^{S447X}. Together with collaborators from the University of British Columbia, or UBC, we demonstrated that the LPL^{S447X} variant resulted in increased LPL enzyme activity leading to reduced triglyceride levels in humans. Under our sublicense and research agreement with uniQure, we collaborated with uniQure and UBC on preclinical activities, and thereafter uniQure developed an LPL gene therapy product, Glybera, which contains the LPL^{S447X} variant. Glybera was approved in the EU in October 2012 to treat LPLD in patients with severe or multiple pancreatitis attacks, despite dietary fat restrictions. uniQure conducted the clinical trials and is responsible for the commercialization of Glybera.

Under the terms of the agreement, we are eligible to receive mid single-digit royalties on net sales of the licensed products, for sales made by uniQure and its affiliates. The royalty rates for sales made by uniQure and its affiliates are reduced to a low single-digit when the licensed patents expire. In July 2013, uniQure announced that it had entered into a partnership with Chiesi Farmaceutici, S.p.A., or Chiesi, for the commercialization of Glybera in the EU and more than a dozen other countries, including Brazil, China, Mexico and Russia. We believe that Chiesi plans to launch Glybera in the fourth quarter of 2014 or the first quarter of 2015 in Europe, and that uniQure is pursuing a U.S. product approval strategy with plans to file a Biologics License Application, or BLA, with the U.S. Food and Drug Administration, or the FDA, following receipt of the results from a planned Phase 4 trial expected to begin in mid-2015. With respect to uniQure's sublicense to Chiesi, we are eligible to receive a percentage in the low twenties of all non-royalty compensation relating to the licensed technology or products that uniQure receives from Chiesi (including, for example, upfront payments and milestone payments), a percentage in the low twenties of any royalties that uniQure receives from Chiesi based on sales of technology or products covered by the licensed patents, plus a mid single-digit percentage of certain further royalties that uniQure receives from Chiesi based on sales of our licensed technology or products after the expiration of all licensed patents covering the product. If uniQure grants a sublicense to a third party other than to Chiesi, then we are eligible to receive a percentage in the low twenties of all non-royalty compensation relating to the licensed technology or products that uniQure receives from such sublicensee (for example, upfront payments and milestone payments), plus a percentage in the low twenties of any royalties that uniQure receives from such sublicensee based on sales of technology or products covered by the licensed patents.

Teva. In December 2012, we entered into a collaborative development and license agreement with Teva, through its subsidiary, Ivax International GmbH, pursuant to which we granted Teva an exclusive worldwide license to develop and commercialize certain products, including TV-45070. Under the terms of the agreement, Teva paid us an upfront fee of $41.0 million. We are collaborating with Teva to further develop TV-45070, and Teva is funding all development costs with respect to the licensed products. Teva is providing funding to us for certain of our full-time equivalents, or FTEs, performing the research collaboration plan. In addition, we are eligible to receive potential milestone payments totaling up to $335.0 million, comprised of a $20.0 million clinical milestone payment, up to $285.0 million in regulatory milestone payments, and a $30.0 million sales-based milestone payment. If TV-45070 is approved, we are also eligible to receive royalties in the low teens to low twenties on net sales of the licensed products for the timeframe that such products are covered by the licensed patents and in certain other instances.

We have an option to a 20% to 30% co-promotion interest for products incorporating TV-45070 in the U.S. Our exercise of this option is subject to meeting objective financial conditions, staffing requirements and compliance standards to be determined in Teva's reasonable discretion in accordance with standard industry practice. Our co-promotion option is exercisable upon the filing of the first new drug application, or NDA, for a TV-45070 product with the FDA and we will be obligated to pay an opt-in fee to Teva, which is calculated by multiplying our co-promotion interest (as a percentage) by the amount of certain milestones paid or payable by Teva, to which is added certain past and future development costs incurred by Teva with respect to the product for the U.S. Our co-promotion interest is in the 20% to 30% range, and equals our percentage share of detailing activities and co-promotion expenses. Such opt-in fee is payable as a reduction to the milestone payments, our share of operating profits, or a combination of the two that Teva would otherwise owe to us. If we exercise this option, upon paying an opt-in fee to Teva we will be eligible to receive, in lieu of royalties with respect to such product sales in the U.S., a percentage share (equal to our co-promotion interest) of operating profits from such product sales in the U.S.

Genentech. In December 2011, we entered into a collaborative research and license agreement with Genentech and its affiliate, F. Hoffman-La Roche Ltd, or Roche, to discover and develop small and large molecules that selectively inhibit the Nav1.7 sodium channel as well as companion diagnostics for the potential treatment of pain. Pursuant to this agreement, we granted Genentech a worldwide exclusive license to develop and commercialize compounds directed to Nav1.7 and products incorporating such compounds for all uses. We also granted Genentech a worldwide non-exclusive license to diagnostic products for the purpose of developing or commercializing such compounds.

Under the terms of the agreement, Genentech paid us an upfront fee of $10.0 million, a $5.0 million milestone payment for the selection of GDC-0276 for development and an $8.0 million milestone payment upon the approval by Health Canada of the Clinical Trial Application for GDC-0276. Genentech is providing funding to us for certain of our FTEs performing the research collaboration plan. In addition, we are eligible to receive pre-commercial and

commercial milestone payments with respect to the licensed products totaling up to an additional $613.0 million, comprised of up to $45.5 million in preclinical and clinical milestone payments, up to $387.5 million in regulatory milestone payments, and up to $180.0 million in sales-based milestone payments for multiple products and indications. In addition, we are eligible to receive royalties based on net sales of the licensed products, which range from a mid single-digit percentage to ten percent for small-molecule inhibitors for the timeframe that such products are covered by the licensed patents and a low single-digit percentage thereafter, plus a single-digit percentage for large-molecule inhibitors of Nav1.7.

In March 2014, we entered into a new agreement with Genentech for pain genetics, where we intend to use our Extreme Genetics discovery platform to focus on identifying genetic targets associated with rare phenotypes where individuals have an inability to perceive pain or where individuals have non-precipitated spontaneous severe pain. Pursuant to the terms of this agreement, any intellectual property arising out of the collaboration will be jointly owned by us and Genentech. We have also granted Genentech a time-limited, exclusive right of first negotiation on a target-by-target basis to form joint drug discovery collaborations. Under the terms of this agreement, Genentech paid us an upfront payment of $1.5 million and we are eligible for an additional $2.0 million in milestone payments. Furthermore, pursuant to the terms of our common share put agreement, an affiliate of Genentech will invest $5.0 million in a private placement concurrent with this public offering at the same price per share as this public offering.

Merck. In June 2009, we entered into an exclusive collaborative research and option agreement with Merck, pursuant to which we conducted a research program to discover and develop novel small-molecule candidates for the potential treatment of cardiovascular disease. Merck provided payments to us for our FTEs who performed our activities pursuant to the research program conducted under the Merck agreement. The Merck collaborative research program ended in December 2012.

Under the terms of the agreement, Merck had the option to obtain an exclusive license under certain intellectual property controlled by us to develop and commercialize compounds and products directed to targets in the research program, which has now expired. In June 2012, Merck exercised its option and paid us $2.0 million to obtain such a worldwide exclusive license to develop and commercialize compound inhibitors of a target that was identified using our Extreme Genetics discovery platform.

Through June 30, 2014, we have received milestone payments and an option fee totaling $9.0 million, and we are eligible for further research, development and regulatory milestone payments of up to $64.0 million, comprised of $21.0 million in preclinical and clinical milestone payments and up to $43.0 million in regulatory milestone payments for products directed to the licensed target as well as royalties from the mid to high single-digit range.

We have an option to co-fund the Phase 1 and first Phase 2 clinical trials of product candidates licensed by Merck by paying Merck 50% of such development costs. Such co-funding option is available at the IND-filing stage for the applicable product candidate. If we exercise our co-funding option then the maximum eligible milestone amounts due to us increase to $86.5 million and the royalties increase to the high single-digit to the sub-teen double-digit range.

Genome BC. We entered into a research funding agreement with Genome BC in January 2009. Under the agreement with Genome BC, we carried out certain research activities with partial funding from Genome BC provided on a quarterly basis in arrears over the term of the research program. This agreement expired at the end of its term in September 2013.

The following table is a summary of revenue recognized from our current collaboration and licensing agreements for each of the years ended December 31, 2011, 2012 and 2013 and the six months ended June 30, 2013 and 2014 (in thousands):

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	2011	2012	2013	2013	2014
				(unaudited)	
uniQure:					
Milestone payment	$ —	$ 198	$ 531	$ —	$ —
Teva:					
Recognition of upfront payment	—	927	13,143	6,607	6,120
Research funding	—	—	630	294	167
Genentech:					
Recognition of upfront payment	94	3,431	3,300	1,659	1,755
Research funding	93	3,517	4,514	2,257	2,255
Milestone payment	—	—	5,062	—	—
Merck:					
Recognition of initial milestone payment	2,145	1,060	—	—	—
Option fee	—	2,060	—	—	—
Research funding	3,206	2,442	—	—	—
Milestone payment	1,038	—	—	—	—
Genome BC:					
Research funding	339	665	172	168	—
Total collaboration revenue	$ 6,915	$ 14,300	$27,352	$ 10,985	$ 10,297

Through June 30, 2014, we had recognized upfront fees and milestone payments totaling CAD$1.1 million, pursuant to our agreement with uniQure. We are eligible to receive certain additional milestone payments of less than CAD$1.0 million for Glybera and for each subsequent product, if any, developed pursuant to the agreement.

Pursuant to the terms of our agreement with Teva, we received an upfront payment of $41.0 million. We determined that the various deliverables under this agreement should be considered as a single unit of accounting. As such, the $41.0 million upfront payment is being recognized as revenue ratably over the expected period of research performance of pre-commercial activities, which is the three-year period from December 2012 through December 2015.

Pursuant to the terms of our December 2011 agreement with Genentech, we received an upfront payment of $10.0 million. We determined that the various deliverables under this agreement should be considered as a single unit of accounting. As such, the $10.0 million upfront payment is being recognized as revenue ratably over the expected period of research performance, which is the three-year period from December 2011 through December 2014. In September 2013, we received a $5.0 million milestone payment for the selection of a compound for good laboratory practices, or GLP, toxicology studies. We recognized the milestone payment upon achievement in August 2013.

Pursuant to the terms of our March 2014 agreement with Genentech, we received an upfront payment of $1.5 million. We determined that the various deliverables under this agreement should be considered as a single unit of accounting. As such, the $1.5 million upfront payment is being recognized as revenue ratably over the expected period of research performance, which is the two-year period from March 2014 to March 2016.

Pursuant to the terms of our agreement with Merck, we received an initial milestone payment of $5.0 million in February 2010. We determined that this initial milestone payment was not substantive and should not be considered a separate element. As such, we recognized the initial milestone payment of $5.0 million as revenue ratably over the expected period of research performance of pre-commercial activities, which was the period from February 2010 through June 2012. Since the beginning of 2011, we have received both an option fee and two milestone payments from Merck. Each of these payments was determined to be substantive and at risk at the inception of the agreement and as such have been recognized as revenue in the period received.

As our other internal and partnered products are in various stages of clinical and preclinical development, we do not expect to generate any revenue from product sales other than from our share of revenue related to our agreement with uniQure for at least the next several years. We expect that revenue for the next several years will be derived from our agreement with uniQure and our eligibility to receive a share of the compensation received by uniQure relating to the technology or products licensed by us, and FTEs and milestone payments under our current collaboration agreements and any additional collaboration agreements that we may enter into in the future. We cannot provide any assurance as to the extent or timing of future milestone payments or royalty payments or that we will receive any future payments at all.

We expect that any revenue we generate will fluctuate quarter to quarter as a function of the timing and amount of milestones and other payments from our existing collaborations and any future collaborations.

The following table is a summary of our deferred revenue for our collaboration and licensing agreements as of December 31, 2011, 2012 and 2013 and June 30, 2014 (in thousands):

	DECEMBER 31,			JUNE 30,
	2011	2012	2013	2014
				(unaudited)
Teva	$ —	$ 39,907	$ 24,691	$ 18,326
Genentech	9,949	6,745	3,115	2,883
Merck	1,155	—	—	—
Total deferred revenue	$ 11,104	$ 46,652	$ 27,806	$ 21,209

We expect such deferred revenue remaining as of June 30, 2014 to be recognized as revenue in the applicable fiscal years ending December 31, 2014, 2015 and 2016 based on our accounting policy for revenue recognition indicated for each collaboration agreement.

Operating Expenses

The following table summarizes our operating expenses for the years ended December 31, 2011, 2012 and 2013 and for the six months ended June 30, 2013 and 2014 (in thousands):

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30	
	2011	2012	2013	2013	2014
				(unaudited)	
Research and development	$ 12,302	$ 10,455	$ 12,303	$ 6,983	$ 5,099
General and administrative	6,730	7,006	5,341	2,828	2,790
Total operating expenses	$ 19,032	$ 17,461	$ 17,644	$ 9,811	$ 7,889

Research and Development Expenses

Research and development expenses represent costs incurred to conduct research on our product candidates in collaboration with Teva, Genentech and Merck, as well as further research and development of our other proprietary product candidates.

Research and development expenses consist of costs incurred in performing research and development activities, including salary, related benefits and share-based compensation for employees engaged in scientific research and development, third-party contract costs relating to research, formulation, manufacturing, preclinical studies and clinical trial activities, third-party license and collaboration fees, laboratory consumables and allocated facility-related costs.

Project-specific expenses reflect costs directly attributable to our clinical development candidates and our preclinical candidates once nominated and selected for further development. All remaining research and development expenses are reflected in early-stage discovery programs. At any given time, we have several active

early-stage research and drug discovery programs. Our personnel and infrastructure are typically deployed over multiple projects and are not directly linked to any individual internal early-stage research or drug discovery program. Therefore, we do not maintain financial information for our internal early-stage research and internal drug discovery programs on a project-specific basis.

We expense all research and development costs as incurred. We expect that our research and development expenses will increase in the future as we advance our proprietary product candidates into clinical development, conduct our development activities under our agreements with Teva and Genentech, advance our internal drug discovery programs into preclinical development and continue our early-stage research. The increase in expense will likely include added personnel and third-party contracts related to research, formulation, manufacturing, preclinical studies and clinical trial activities as well as third-party license and collaboration fees and laboratory consumables.

Clinical development timelines, likelihood of regulatory approval and commercialization and associated costs are uncertain and difficult to estimate and can vary significantly. We anticipate determining which research and development projects to pursue as well as the level of funding available for each project based on the scientific research and preclinical and clinical results of each product candidate and related regulatory action. We expect our research and development expenses to continue to represent our largest category of operating expense for at least the next 12 to 24 months.

General and Administrative Expenses

General and administrative expenses consist primarily of salary, related benefits and share-based compensation of our executive, finance, business development and administrative functions, travel expenses, allocated facility-related costs not otherwise included in research and development expenses, and professional fees for auditing, tax and legal services, including legal expenses for intellectual property protection.

We expect that general and administrative expenses will increase in the future as we expand our operating activities to support increased research and development activities, and build our commercial infrastructure for the potential option for co-promotion of TV-45070 in the U.S., if and when regulatory approval is received.

We also anticipate incurring additional general and administrative expenses as a public company, including costs of additional personnel, additional professional fees for audit, accounting and legal services, director fees, enhanced business and accounting systems, costs related to investor relations and increased premiums for directors' and officers' liability insurance.

Other Income (Expense)

Interest Income. Interest income consists of income earned on our cash and investment balances. Our interest income has not been significant due to the levels of cash and investment balances and low interest earned on such balances. We anticipate that our interest income will continue to fluctuate depending on timing of payments from collaborative partners, our cash and investment balances, and interest rates.

Interest Expense. Interest expense consists of interest incurred on the note payable held by Isis Pharmaceuticals, Inc., or Isis, related to our collaboration agreement for XEN701. As we fully repaid the note payable to Isis in June 2013 and now have no other debts outstanding, we expect to have little or no interest expense in the future. In the fourth quarter of 2013, we discontinued development of XEN701 as the preclinical data did not support its continued advancement. In the first quarter of 2014, we provided formal notice of termination of the agreement to Isis.

Foreign Exchange Gain (Loss). Our functional currency is the Canadian dollar. For presentation purposes, our assets and liabilities are translated to U.S. dollars at exchange rates at the reporting date. Any resulting exchange gains and losses resulting from the translation of U.S. denominated transactions are recorded in current operations.

Gain (Loss) on Write-off and Disposal of Assets. During the year ended December 31, 2012, we wrote-off leasehold improvements at our leased facility which had a net book value of $1.0 million in connection with a lease extension and modification agreement made effective April 1, 2012.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in conformity with generally accepted accounting principles in the

U.S., or U.S. GAAP. The preparation of our financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the revenue and expenses incurred during the reported periods. We base estimates on our historical experience, known trends and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully described in the notes to our financial statements appearing in this prospectus, we believe that the following accounting policies are the most critical to understanding and evaluating our reported financial results.

Revenue Recognition

We have generated revenue primarily through collaboration and license agreements.

Under these collaboration agreements, we may receive non-refundable upfront payments, funding for research and development services, milestone payments, other contingent payments and royalties based on achieving pre-determined milestones. Research funding is recorded as revenue over the period of the research commitment. Milestone and other contingent payments are recorded as revenue when the underlying milestone is achieved if there is substantive uncertainty at the date the collaboration arrangement is entered into that the event will be achieved. In assessing the appropriate revenue recognition related to a collaboration agreement, we first determine whether an arrangement includes multiple elements, such as the delivery of intellectual property rights and research and development services. Upfront payments are recorded as deferred revenue in the balance sheet and are recognized as collaboration revenue over the estimated period of research performance that is consistent with the terms of the research and development obligations contained in the collaboration agreement. We periodically review the estimated period of performance based on the progress made under each arrangement.

In January 2011, the Financial Accounting Standards Board, or FASB, adopted new authoritative guidance on revenue recognition for multiple element arrangements, Accounting Standards Update, or ASU, No. 2009-13, *Multiple-Deliverable Revenue Arrangements*, or ASU 2009-13. This guidance, which applies to multiple element arrangements entered into or materially modified on or after January 1, 2011, amends the criteria for separating and allocating consideration in a multiple element arrangement by modifying the fair value requirements for revenue recognition and eliminating the use of the residual method. The selling prices of deliverables under an arrangement may be derived using third-party evidence, or TPE, or a best estimate of selling price, or BESP, if vendor-specific objective evidence of fair value, or VSOE, is not available.

Deliverables under the arrangement will be separate units of accounting provided that a delivered item has value to the customer on a stand-alone basis and if the arrangement does not include a general right of return relative to the delivered item and delivery or performance of the undelivered items is considered probably and substantially in the control of the vendor. The update also provided new guidance regarding how to apply the standard to arrangements that are materially modified following adoption of the update. The potential future impact of the adoption of this update will depend on the nature of any new agreements entered into or material modifications to existing arrangements.

Under a collaboration agreement, a steering committee is sometimes responsible for overseeing the general working relationships, determining the protocols to be followed in the research and development performed, and evaluating the results from the continued development of the product. We intend to evaluate whether our participation in any joint steering committees is a substantive obligation or whether the services are considered inconsequential or perfunctory.

The factors we would consider in determining if our participation in a joint steering committee is a substantive obligation include: (i) which party negotiated or requested the steering committee, (ii) how frequently the steering committee meets, (iii) whether or not there are any penalties or other recourse if we do not attend the steering committee meetings, (iv) which party has decision making authority on the steering committee and (v) whether or not the collaborator has the requisite experience and expertise associated with the research and development of the licensed intellectual property.

Incentive milestone payments may be triggered either by the results of our research efforts or by events external to us, such as regulatory approval to market a product. We recognize consideration that is contingent upon achievement of a milestone in its entirety as revenue in the period in which the milestone is achieved, but only if the consideration earned from the achievement of a milestone meets all the criteria for the milestone to be considered substantive at the inception of the arrangement. For a milestone to be considered substantive, the consideration earned by achieving the milestone must be commensurate with either our performance to achieve the milestone or the enhancement of the value of the item delivered as a result of a specific outcome resulting from our performance to achieve the milestone, relate solely to our past performance and be reasonable relative to all deliverables and payment terms in the collaboration agreement.

We generally recognize revenue from upfront payments ratably over the term of our estimated period of performance of research under our collaboration agreements in the event that such arrangements represent a single unit of accounting.

In January 2012, we also adopted the guidance (ASU No. 2010-17, *Milestones Method of Revenue Recognition*, or ASU 2010-17) that permits the recognition of revenue contingent upon our achievement of a milestone in its entirety, in the period the milestone is achieved, only if the milestone meets certain criteria and is considered to be substantive.

We made judgments which affect the periods over which we recognized revenue, including modifying such periods based on any amendments to our collaboration agreements.

Accrued Expenses

As part of the process of preparing our financial statements, we are required to estimate accrued expenses. This process involves communicating with our applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost. The majority of our service providers invoice us monthly in arrears for services performed. We make estimates of our accrued expenses as of each balance sheet date in our financial statements based on facts and circumstances known to us. Examples of estimated accrued expenses include:

- fees paid to contract research organizations in connection with preclinical and toxicology studies and clinical trials;
- fees paid to investigative sites in connection with clinical trials;
- fees paid to contract manufacturers in connection with the production of clinical trial materials; and
- fees paid for professional services.

There have been no material adjustments to our estimates of accrued expenses for any of the periods presented herein, and we do not anticipate that our payment of actual expenses will differ materially from our estimates at June 30, 2014.

Share-Based Compensation

Compensation expense related to share-based awards to employees, directors and other service providers is measured and recognized in our financial statements based on the fair value method with a corresponding increase in additional paid-in capital. Any consideration we receive from the exercise of stock options is credited to share capital.

We measure the fair value of each option awarded to employees on the grant date using the Black-Scholes option-pricing model and a single option award approach for options issued. The fair value of the award determined at grant is amortized over the vesting period.

We measure the fair value of each option awarded to non-employees on the date of grant and periodically re-measure during the grant period as the options are earned.

We expense the value of the options, net of forfeitures, over the vesting periods of the awards, which is typically three to four years. Prior to the completion of this offering, we used the methodology described below to determine fair value. Following completion of this offering, the fair value of our common shares will be determined based on the quoted market price.

Our use of the Black-Scholes option-pricing model requires the input of highly subjective assumptions, including the fair value of the underlying common shares, risk-free interest rates, the expected term of the option, the expected volatility of the price of our common shares and the expected dividend yield of our common shares. The assumptions used in our option-pricing model represent management's best estimates. These estimates involve inherent uncertainties and the application of management's judgment. If factors change and different assumptions are used, our share-based compensation expense could be materially different in the future.

Our assumptions and estimates are as follows:

- *Fair Value of Common Shares*. Because our common shares are not yet publicly traded, we must estimate their fair value, as discussed in "*Valuation of Common Shares*" below.
- *Risk-Free Interest Rate*. We base the risk-free interest rate used in the Black-Scholes option-pricing model on the implied yield available on the long-term U.S. Treasury note rate.
- *Expected Term.* The expected term is our estimate of when share-based awards are expected to be exercised. We use the simplified method to determine the expected term of options. Under this method the expected term represents the average of the vesting period and the contractual term.
- *Expected Volatility.* We determine the price volatility factor based on the historical volatilities of our publicly-traded peer group as we do not have a trading history for our common shares. Industry peers consist of several public companies in the life sciences industry that are similar to us in size, stage of life cycle, and financial leverage. We did not rely on implied volatilities of traded options in our industry peers' common shares because the volume of activity was relatively low. Following completion of the offering, we intend to continue to consistently apply this process using the same or similar public companies until a sufficient amount of historical information regarding the volatility of our own common shares price becomes available, or unless circumstances change such that the identified companies are no longer similar to us, in which case, more suitable companies whose share prices are publicly available would be utilized in the calculation.
- *Expected Dividend Yield*. We have never declared or paid cash dividends and based on our current expectation we do not expect to pay dividends in the foreseeable future. Consequently, we used an expected dividend yield of zero.

The assumptions we used to determine the fair value of stock options granted during the periods presented are as follows, presented on a weighted-average basis:

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30	
	2011	2012	2013	2013	2014
				(unaudited)	
Risk-free interest rate	2.36%	1.14%	1.03%	1.03%	1.97%
Expected term (in years)	6.2	6.2	6.2	6.2	6.2
Expected volatility	70%	70%	70%	70%	74%
Expected dividend yield	—	—	—	—	—

In addition to the assumptions used in the Black-Scholes option-pricing model, we must also estimate a forfeiture rate to calculate the share-based compensation expense for our awards. Our forfeiture rate is based on an analysis of our actual forfeitures. We will continue to evaluate the appropriateness of the forfeiture rate based on actual forfeiture experience, analysis of employee turnover, and other factors, such as historical experience with option exercises. Quarterly changes in the estimated forfeiture rate can have a significant impact on our share-based compensation expense as the cumulative effect of adjusting the rate is recognized in the period the forfeiture estimate is changed. If a revised forfeiture rate is higher than the previously estimated forfeiture rate, an adjustment is made that will result in a decrease to the share-based compensation expense recognized in the financial statements. If a revised forfeiture rate is lower than the previously estimated forfeiture rate, an adjustment is made that will result in an increase to the share-based compensation expense recognized in the financial statements.

We will continue to use judgment in evaluating the assumptions related to our share-based compensation on a prospective basis. As we continue to accumulate additional data related to our common shares, we may have refinements to our estimates, which could impact our future share-based compensation expense.

Valuation of Common Shares

We are required to estimate the fair value of the common shares underlying our share-based awards when performing the fair value calculations with the Black-Scholes option-pricing model. The fair value of our common shares was determined by our board of directors, with input from management, and takes into account our most recently available valuation of common shares and our assessment of additional objective and subjective factors we believed were relevant and which may have changed between the date of the most recent valuation and the date of the grant. We believe that our audit committee, or the Committee, and our board of directors have the relevant experience and expertise to determine the fair value of our common shares.

Because there has been no public market for our common shares, the Committee and our board of directors considers numerous objective and subjective factors to determine its best estimate of the fair value of our common shares as of each grant date, including, among other thing, the following:

- the lack of marketability of our common shares;
- the rights of the preferred shares and the common shares in a liquidation scenario;
- current market conditions applicable at the time of the assessment;
- our financial condition;
- our business performance;
- the latest sales and issuances of our preferred shares to third parties;
- prevailing industry trends;
- the stage of development of our product candidates; and
- with respect to grants made on or following January 1, 2013, valuation reports prepared by an independent third-party valuation firm.

Option Grants

The following table summarizes by grant date the number of shares subject to options granted between January 1, 2013 and the date of this prospectus, the per share exercise price of the options and the fair value of common shares underlying the options on the date of grant:

GRANT DATE	NUMBER OF COMMON SHARES UNDERLYING OPTIONS GRANTED	OPTION EXERCISE PRICE (CAD$)	OPTION EXERCISE PRICE (U.S. $)	FAIR VALUE PER SHARE (U.S. $)
January 1, 2013	167,314	2.67	2.67	5.20
January 2, 2013	307	2.67	2.67	5.22
January 7, 2013	102	2.67	2.72	5.22
January 14, 2013	41,152	2.67	2.72	5.22
January 28, 2013	616	2.67	2.67	5.11
February 10, 2013	617	2.67	2.67	5.14
February 11, 2013	1,028	2.67	2.67	5.11
March 10, 2013	30,864	2.67	2.62	5.01
April 1, 2013	154	2.67	2.62	9.60
April 25, 2013	4,115	2.67	2.62	9.60
April 28, 2013	1,028	2.67	2.62	9.60
June 16, 2013	411	2.67	2.62	9.60
August 1, 2013	42,592	9.76	9.42	9.42
January 14, 2014	157,139	10.78	9.86	9.86
February 2, 2014	411	10.78	9.72	9.72
July 28, 2014	3,701	11.22	10.40	10.40
August 5, 2014	2,572	11.22	10.25	10.25

The exercise prices of our options are denominated in Canadian dollars. Except as indicated above, the exercise prices in the chart above have been translated to U.S. dollars at the exchange rate in effect on the applicable grant date.

The fair value determinations as of January 1, 2013 and June 30, 2013 were determined retrospectively by the Committee and our board of directors having considered and with reference to a report prepared by an independent third-party valuation firm utilizing the option pricing method, or OPM. In connection with the assessment, we performed a probability-weighted analysis of the different valuations expected for the common shares in the event that we complete an IPO as well as in the alternative. Such an analysis may be considered to be part of the Probability-Weighted Expected Return Method, or PWERM, methodology.

OPM analyzes the value of each class of security by treating it as a call option on a portion of the future value of a business. Under this method, the common shares have value only if the funds available for distribution to shareholders exceed the value of the liquidation preference at the time of a liquidity event (for example, in a merger or sale), assuming the enterprise has funds available to make a liquidation preference meaningful and collectible by the shareholders. OPM values each equity class by creating a series of call options on our equity value, with exercise prices based on the liquidation preferences, participation rights, and strike prices of derivatives. This method is generally preferred when future outcomes are difficult to predict and dissolution or liquidation is not imminent.

With respect to our determination of fair value as of January 1, 2013, our board of directors determined the fair value with reference to the valuation report, which was prepared based on a blend of the income and market approach with a two-thirds weighting for the income approach and a one-third weighting for the market approach. We considered this weighting appropriate given our stage of development as it considers our projected growth rate and financial projections while considering the enterprise value for similar public companies. In the report, the equity value was allocated using a time to sale event of three years and time to IPO of one year, using a discount rate of 33.8%, determined, in part, with reference to a company-specific risk premium accounting for the fact that we had not, among other things: (i) completed clinical trials for our product candidates, (ii) received needed regulatory approvals for commercial sale in important markets and (iii) demonstrated large-scale commercial viability of our products. The report assumed volatility of 70% based on historical trading volatility for our peer group of companies. A discount for lack of marketability, to account for the illiquidity of the common shares, was applied to the indicated common share value to determine the fair value of the shares. The discount was 35% for the sale scenario and 10% for the IPO scenario. The discount for lack of marketability was determined based on qualitative factors such as our expectation of the timing of the liquidity event under both the sale and IPO scenarios, our ability to access additional capital and the resulting dilution, and the degree of risk in the biotechnology industry. Based on these factors, our board of directors concluded that our common shares had a fair value of $5.20 (CAD$5.15) per share on January 1, 2013.

For our June 30, 2013 determination of fair value, we and our valuation firm considered a number of factors including:

- the improving market receptivity for early-stage biotechnology companies, which caused us to consider an IPO;
- the grant by the FDA of orphan drug designation to TV-45070;
- our decision to exercise our license option on XEN701 and commence IND-enabling studies for this product candidate; and
- progress towards our IPO, including engagement of investment bankers, lawyers and accountants and our initial organizational meeting.

For our June 30, 2013 valuation, we estimated enterprise value using a blend of the income and market approaches with a two-thirds weighting for the income approach and a one-third weighting for the market approach, as in our January 1, 2013 valuation. We adjusted our valuation model to increase the probability of an IPO from 30% to 50% to account for an increased probability of an IPO scenario, in light of continued favorable market conditions and the progress we achieved towards a potential initial public offering of our common shares. Additionally, we discounted the common shares using a discount rate of 24.3% and reduced the discount for lack of marketability for the IPO scenario from 10% to 5% given that we believed that we were moving close to a potential exit event through an IPO. We believe that the reduction in discount rate for lack of marketability from the valuation as at January 1, 2013 was consistent with the reduction of the risk and other qualitative factors. We reduced the expected time to IPO from 12

months to 6 months for this valuation while maintaining the expected time to sale scenario at three years. We assumed volatility remained at 70% as in the prior valuation.

Based on the revised assumptions underlying the valuation model and the changes in our business and in the market values of early-stage biotechnology companies, as well as the impact of an increasing enterprise value on the relative value of our common shares as compared to our convertible preferred shares, the Committee and our board of directors, together with management input, determined that the fair value of our common shares had increased to $9.28 (CAD$9.76) per share as of June 30, 2013. For financial reporting purposes, given the lack of company milestones in the second quarter of 2013 that would be expected to materially influence common share value, and given the fact that the concentration of IPO preparation activities and market receptivity improvement occurred in the second quarter of 2013, we conservatively applied this $9.28 (CAD$9.76) value for computation of stock-based compensation expense to our option grants between April 1, 2013 and June 30, 2013. In connection with the stock option grant on August 1, 2013, our board of directors determined that there had been no material change to the fair value of our common shares as of such date.

There were no option grants from August 2, 2013 to December 31, 2013.

For our December 31, 2013 determination of fair value, we and our valuation firm considered a number of factors including:

- the general market receptivity for early-stage biotechnology companies;
- Teva filing an IND with the FDA for the commencement of Phase 2b study for OA;
- Genentech advancing GDC-0276 into IND-enabling studies;
- a decision to discontinue the development of XEN701; and
- progress towards our IPO.

For our December 31, 2013 valuation, we estimated enterprise value using a blend of the income and market approaches. The probability of an IPO increased from 50% to 60% from the June 30, 2013 valuation. We discounted the common shares using a discount rate of 25.7% and increased the discount for lack of marketability for the IPO scenario from 5% to 10%, given that we had increased the expected time to IPO from six months to nine months from the valuation date and feedback from our advisors that IPO market conditions were not as strong as earlier in the year. We assumed volatility remained at 70% as in the prior valuation. The expected time to sale scenario remained at three years.

Based on the revised assumptions underlying the valuation model and the changes in our business and in the market values of early-stage biotechnology companies, the Committee and our board of directors, together with management input, determined that the fair value of our common shares was equal to $10.15 (CAD$10.78) per share as of December 31, 2013. We applied this $10.15 (CAD$10.78) value for computation of stock-based compensation expense to our option grants between December 31, 2013 and February 2, 2014, as our board of directors determined that there had been no material change to the fair value of our common shares between December 31, 2013 and the dates of the option grants.

There were no option grants from February 3, 2014 to June 30, 2014.

For our June 30, 2014 determination of fair value, we and our valuation firm considered a number of factors including:

- the general market receptivity for early-stage biotechnology companies and the IPO market in general;
- Teva commencing the Phase 2b study for OA;
- Genentech advancing GDC-0276 towards an IND filing; and
- progress towards our IPO.

For our June 30, 2014 valuation, we estimated enterprise value using a blend of the income and market approaches. The probability of an IPO remained unchanged from the December 30, 2013 valuation at 60%. We discounted the common shares using a discount rate of 19.4% and decreased the discount for lack of marketability for the IPO

scenario from 10% to 5%, given that we had decreased the expected time to IPO from nine months to five months from the valuation date. We assumed volatility remained at 70% as in the prior valuation. The expected time to sale scenario remained at three years.

Based on the revised assumptions underlying the valuation model and the changes in our business and in the market values of early-stage biotechnology companies, the Committee and our board of directors, together with management input, determined that the fair value of our common shares was equal to $10.54 (CAD$11.22) per share as of June 30, 2014.

Based on the assumed initial public offering price of $11.00 per common share (the midpoint of the price range set forth on the cover page of this prospectus), the aggregate intrinsic value of stock options outstanding as of June 30, 2014 was $9.6 million, of which $7.6 million relate to vested options and $2.0 million to unvested options.

The following table summarizes the share-based compensation expense recorded for the periods shown (in thousands):

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30	
	2011	2012	2013	2013	2014
				(unaudited)	
Research and development	$ 145	$ 112	$ 147	$ 70	$ 96
General and administrative	290	294	428	203	277
Total	$ 435	$ 406	$ 575	$ 273	$ 373

Results of Operations

Comparison of Six Months Ended June 30, 2013 and 2014

The following table summarizes the results of our operations for the six months ended June 30, 2013 and 2014, together with changes in those items (in thousands):

	SIX MONTHS ENDED JUNE 30,		CHANGE 2013 VS. 2014 INCREASE/(DECREASE)
	2013	2014	
	(unaudited)		
Collaboration revenue	$ 10,985	$ 10,297	$ (688)
Royalties	—	2	2
Research and development expenses	6,983	5,099	(1,884)
General and administrative expenses	2,828	2,790	(38)
Other:			
Interest income	76	278	202
Interest (expense)	(41)	—	41
Foreign exchange gain (loss)	1,920	(85)	(2,005)
Gain (loss) on write-off and disposal of assets	11	—	(11)
Net income (loss)	$ 3,140	$ 2,603	$ (537)

Revenue

We recognized revenue of $10.3 million for the six months ended June 30, 2014 compared to $11.0 million for the six months ended June 30, 2013, a decrease of $0.7 million. The decrease was primarily attributable to a $0.6 million decrease resulting from the change in the foreign exchange rate between the U.S. and Canadian dollar, a $0.2 million decrease in research funding from Genome BC as the agreement with Genome BC expired in late 2013 and a $0.1 million decrease in FTE funding from Teva. This was partially offset by the recognition of $0.2 million of the upfront payment received from Genentech for the pain genetics collaboration entered into in March 2014.

Research and Development Expenses

The following table summarizes our research and development expenses for the six months ended June 30, 2013 and 2014, together with changes in those items (in thousands):

	SIX MONTHS ENDED JUNE 30,		CHANGE 2013 VS. 2014 INCREASE/(DECREASE)
	2013	2014	
	(unaudited)		
Teva collaboration (TV-45070) expenses	$ 482	$ 534	$ 52
Genentech collaboration (GDC-0276 and Genetics) expenses	2,358	2,571	213
Other collaboration expenses	89	—	(89)
Preclinical and discovery program expenses	4,054	1,994	(2,060)
Total research and development expenses	$ 6,983	$ 5,099	$ (1,884)

Research and development expenses were $5.1 million for the six months ended June 30, 2014 as compared to $7.0 million for the six months ended June 30, 2013. The decrease of $1.9 million was primarily attributable to a $2.1 million decrease in preclinical and discovery program expenses consisting of a decrease of $3.0 million for XEN701 which was discontinued in late 2013, partially offset by an increase in spending of $0.9 million for our other early stage research programs. This decrease was partially offset by Genentech collaboration expenses which increased by $0.2 million primarily resulting from costs incurred for the pain genetics collaboration entered into in March 2014.

General and Administrative Expenses

The following table summarizes our general and administrative expenses for the six months ended June 30, 2013 and 2014, together with changes in those items (in thousands):

	SIX MONTHS ENDED JUNE 30,		CHANGE 2013 VS. 2014 INCREASE/(DECREASE)
	2013	2014	
	(unaudited)		
General and administrative expenses	$ 2,828	$ 2,790	$ (38)

General and administrative expenses were $2.8 million for both the six months ended June 30, 2014 and the six months ended June 30, 2013.

Other Income (Expense)

The following table summarizes our other income (expense) for the six months ended June 30, 2013 and 2014, together with changes in those items (in thousands):

	SIX MONTHS ENDED JUNE 30,		CHANGE 2013 VS. 2014 INCREASE/(DECREASE)
	2013	2014	
	(unaudited)		
Other income (expense):	$ 1,966	$ 193	$ (1,773)

Interest income was $0.3 million for the six months ended June 30, 2014 as compared to $0.1 million for the six months ended June 30, 2013, an increase of $0.2 million. This increase was primarily attributable to an increase in interest rates and balances of savings accounts.

We recognized a foreign exchange loss of $0.1 million for the six months ended June 30, 2014 as compared to a foreign exchange gain of $1.9 million for the six months ended June 30, 2013. The foreign exchange gain in 2013 was due to the increased Canadian dollar to U.S. dollar exchange rate.

Comparison of Years Ended December 31, 2012 and 2013

The following table summarizes the results of our operations for the years ended December 31, 2012 and 2013 together with changes in those items (in thousands):

	YEAR ENDED DECEMBER 31,		CHANGE 2012 VS. 2013 INCREASE/(DECREASE)
	2012	2013	
Collaboration revenue	$ 14,300	$ 27,352	$ 13,052
Royalties	8	4	(4)
Research and development expenses	10,455	12,302	1,848
General and administrative expenses	7,006	5,341	1,665
Other:			
Interest income	144	338	194
Interest (expense)	(93)	(64)	29
Foreign exchange gain (loss)	(169)	2,035	2,204
Gain (loss) on write-off and disposal of assets	(1,030)	11	1,041
Net income (loss)	$ (4,301)	$ 12,032	$ 16,333

Revenue

We recognized revenue of $27.4 million for the year ended December 31, 2013 compared to $14.3 million for the year ended December 31, 2012, an increase of $13.1 million. The increase was primarily attributable to the recognition of $12.8 million of the upfront payment and research funding from Teva, a $5.1 million milestone payment received from Genentech, $1.0 million in additional FTE funding we received from Genentech, and $0.3 million in non-royalty compensation (related to a payment) from uniQure. This was offset by a $0.5 million decrease in research funding from Genome BC and $5.6 million decrease in revenue from Merck for an option fee, recognition of an upfront payment, and FTE funding related to the research agreement that ended in December 2012.

Research and Development Expenses

The following table summarizes research and development expenses for the years ended December 31, 2012 and 2013 together with changes in those items (in thousands):

	YEAR ENDED DECEMBER 31,		CHANGE 2012 VS. 2013 INCREASE/(DECREASE)
	2012	2013	
Teva collaboration (TV-45070) expenses	$ 1,951	$ 1,005	$ (946)
Genentech collaboration (GDC-0276) expenses	3,652	5,072	1,420
Other collaboration expenses	1,717	133	(1,584)
Preclinical and discovery program expenses	3,135	6,093	2,958
Total research and development expenses	$ 10,455	$ 12,303	$ 1,848

Research and development expenses were $12.3 million for the year ended December 31, 2013 as compared to $10.5 million for the year ended December 31, 2012. The increase of $1.8 million was primarily attributable to a $3.0 million increase in preclinical and discovery program expenses consisting of a $1.5 million increase in spending for XEN701 and a $1.5 million increase in spending for our other early stage research programs. There was also a $1.4 million increase in Genentech collaboration expenses due to an increase in the number of FTEs dedicated to this collaboration. The increases were offset in part by a $1.6 million decrease in other collaboration expenses primarily due to the Merck collaborative research program ending in December 2012 and a $0.9 million decrease in spending for TV-45070 related to Teva's assumption of the development costs of that product candidate as of January 1, 2013.

General and Administrative Expenses

The following table summarizes general and administrative expenses for the years ended December 31, 2012 and 2013 together with changes in those items (in thousands):

	YEAR ENDED DECEMBER 31,		CHANGE 2012 VS. 2013 INCREASE/(DECREASE)
	2012	2013	
General and administrative expenses	$ 7,006	$ 5,341	$ (1,665)

General and administrative expenses were $5.3 million for the year ended December 31, 2013 compared to $7.0 million for the year ended December 31, 2012. This decrease was primarily due to a reduction in intellectual property expenses, the majority of which have been assumed by our collaborators.

Other Income (Expense)

The following table summarizes our other income (expense) for the years ended December 31, 2012 and 2013 together with changes in those items (in thousands):

	YEAR ENDED DECEMBER 31,		CHANGE 2012 VS. 2013 INCREASE/(DECREASE)
	2012	2013	
Other income (expense):	$ (1,148)	$ 2,320	$ 3,468

Interest income was $0.3 million for the year ended December 31, 2013 as compared to $0.1 million for the year ended December 31, 2012, an increase of $0.2 million. The increase was primarily attributable to our increased cash and investment balances from our receipt of $41.0 million in December 2012 from Teva.

We recognized a foreign exchange gain of $2.0 million for the year ended December 31, 2013 as compared to a foreign exchange loss of $0.2 million for the year ended December 31, 2012. The foreign exchange gain in 2013 was due to the increased Canadian dollar to U.S. dollar exchange rate.

We wrote-off leasehold improvements with a net book value of $1.0 million for the year ended December 31, 2012 in connection with a lease extension and modification agreement made effective April 1, 2012. No such item was recorded in the year ended December 31, 2013.

Comparison of Years Ended December 31, 2011 and 2012

The following table summarizes the results of our operations for the years ended December 31, 2011 and 2012 together with changes in those items (in thousands):

	YEAR ENDED DECEMBER 31,		CHANGE 2011 VS. 2012 INCREASE/(DECREASE)
	2011	2012	
Collaboration revenue	$ 6,915	$ 14,300	$ 7,385
Royalties	3	8	5
Research and development expenses	12,302	10,455	(1,847)
General and administrative expenses	6,730	7,006	276
Other:			
Interest income	153	144	(9)
Interest (expense)	(91)	(93)	(2)
Foreign exchange gain (loss)	60	(169)	(229)
Gain (loss) on write-off and disposal of assets	—	(1,030)	(1,030)
Net income (loss)	$ (11,992)	$ (4,301)	$ 7,691

Revenue

We recognized revenue of $14.3 million for the year ended December 31, 2012 as compared to $6.9 million for the year ended December 31, 2011, an increase of $7.4 million. The increase during 2012 was primarily due to an upfront payment and research funding pursuant to our collaboration agreement with Genentech.

Research and Development Expenses

The following table summarizes research and development expenses for the years ended December 31, 2011 and 2012 together with changes in those items (in thousands):

	YEAR ENDED DECEMBER 31,		CHANGE 2011 VS. 2012
	2011	2012	INCREASE/(DECREASE)
Teva collaboration (TV-45070) expenses	$ 2,455	$ 1,951	$ (504)
Genentech collaboration (GDC-0276) expenses	3,794	3,652	(142)
Other collaboration expenses	3,301	1,717	(1,584)
Preclinical and discovery program expenses	2,752	3,135	383
Total research and development expenses	$ 12,302	$ 10,455	$ (1,847)

Research and development expenses were $10.5 million for the year ended December 31, 2012 compared to $12.3 million for the year ended December 31, 2011. The decrease was primarily due to a $1.6 million decrease in other collaboration expenses related to the Genome BC and Merck collaborations which ended in December 2011 and 2012, respectively. There was also a $0.5 million decrease for TV-45070 related to Teva's assumption of the development costs of that product candidate as of January 1, 2013.

General and Administrative Expenses

The following table summarizes general and administrative expenses for the years ended December 31, 2011 and 2012 together with changes in those items (in thousands):

	YEAR ENDED DECEMBER 31,		CHANGE 2011 VS. 2012
	2011	2012	INCREASE/(DECREASE)
General and administrative expenses	$ 6,730	$ 7,006	$ 276

General and administrative expenses were $7.0 million for the year ended December 31, 2012 compared to $6.7 million for the year ended December 31, 2011, an increase of $0.3 million. The increase was primarily due to an increase in intellectual property expenses associated with our discovery and development programs.

Other Income (Expense)

The following table summarizes our other income (expense) for the years ended December 31, 2011 and 2012 together with changes in those items (in thousands):

	YEAR ENDED DECEMBER 31,		CHANGE 2011 VS. 2012
	2011	2012	INCREASE/(DECREASE)
Other income (expense):	$ 122	$(1,148)	$ (1,270)

Interest income for the year ended December 31, 2012 was comparable to interest income for the year ended December 31, 2011 due to similar levels of cash and investment balances for both years.

Interest expense for the year ended December 31, 2012 was comparable to interest expense for the year ended December 31, 2011 due to the similar amount of principal of the note payable to our collaborator, Isis, pursuant to our agreement with them.

We recognized a foreign exchange loss of $0.2 million for the year ended December 31, 2012 compared to a foreign exchange gain of $0.1 million for the year ended December 31, 2011 due to unfavorable exchange rate fluctuation.

We wrote-off leasehold improvements with a net book value of $1.0 million during the year ended December 31, 2012 in connection with a lease extension and modification agreement made effective April 1, 2012. No such item was recorded in the year ended December 31, 2011.

Liquidity and Capital Resources

To date, we have financed our operations primarily through funding received from collaboration and license agreements and private placements of our common and preferred shares, as well as through the receipt of government funding. Through June 30, 2014, we have received an aggregate of approximately $265.2 million to fund our operations, of which approximately $145.7 million was non-equity funding pursuant to collaboration and license agreements, approximately $17.0 million was pursuant to government funding, and approximately $102.5 million was pursuant to the sale of our preferred shares. As of June 30, 2014, we had cash, cash equivalents and marketable securities of $44.7 million.

We have incurred significant operating losses since inception. Our net loss was $12.0 million and $4.3 million for the years ended December 31, 2011 and 2012, respectively. Although we had $12.0 million in net income for the year ended December 31, 2013, and $2.6 million in net income for the six months ended June 30, 2014, we had an accumulated deficit of $114.1 million from inception through June 30, 2014. We expect to continue to incur significant expenses in excess of our revenue and expect to incur operating losses over the next several years. Our net losses may fluctuate significantly from quarter to quarter and year to year. We expect to continue to incur significant expenses and operating losses for the foreseeable future as we continue our research and preclinical and clinical development of our product candidates; expand the scope of our current clinical studies for our product candidates; initiate additional preclinical, clinical or other studies for our product candidates, including under our collaboration agreements; change or add additional manufacturers or suppliers; seek regulatory and marketing approvals for any of our product candidates that successfully complete clinical studies; seek to identify and validate additional product candidates; acquire or in-license other product candidates and technologies; make milestone or other payments under our in-license agreements including, without limitation, our agreements with UBC and the Memorial University of Newfoundland, or MUN; maintain, protect and expand our intellectual property portfolio; attract and retain skilled personnel; establish a sales, marketing and distribution infrastructure to commercialize any products for which we or one of our collaborators may obtain marketing approval, and maintain commercial rights; create additional infrastructure to support our operations as a public company and our product development and planned future commercialization efforts; and experience any delays or encounter issues with any of the above.

Until such time as we can generate substantial product revenue, if ever, we expect to finance our cash needs through a combination of collaboration agreements and equity or debt financings. Except for any obligations of our collaborators to reimburse us for research and development expenses or to make milestone payments under our agreements with them, upon completion of this offering, we will not have any committed external sources of capital. To the extent that we raise additional capital through the future sale of equity or debt, the ownership interest of our shareholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our existing common shareholders. If we raise additional funds through collaboration agreements in the future, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Our future capital requirements are difficult to forecast and will depend on many factors, including:

- whether our existing collaborations continue to generate research funding, milestone payments and royalties to us;
- the number and stage of development of future product candidates that we choose to pursue;
- the scope, progress, results and costs of research and development of our future product candidates independently, and conducting preclinical research and clinical studies;
- the timing and costs involved in obtaining regulatory approvals for any future product candidates we develop independently;

- the cost associated with exercising our co-promotion option for TV-45070 in the U.S., should the opportunity arise and we choose to do so;
- the cost of commercialization activities, if any, of any future product candidates we develop independently that are approved for sale, including marketing, sales and distribution costs;
- the cost of manufacturing our future product candidates and any products we successfully commercialize independently;
- our ability to maintain existing collaborations and to establish new collaborations, licensing or other arrangements and the financial terms of such arrangements;
- the costs of preparing, filing, prosecuting, maintaining, defending and enforcing patents, including litigation costs and the outcome of such litigation; and
- the timing, receipt and amount of sales, or royalties on Glybera, TV-45070, GDC-0276 and our future product candidates, if any.

Based on our research and development plans and our timing expectations related to the progress of our programs, we expect that the net proceeds from this offering, together with our existing cash, cash equivalents and marketable securities as of the date of this prospectus and research funding that we expect to receive under our existing collaborations, will enable us to fund our operating expenses and capital expenditure requirements for at least the next 12 to 24 months. We have based this estimate on assumptions that may prove to be wrong, and we could use our capital resources sooner than we expect. Additionally, the process of testing drug candidates in clinical trials is costly, and the timing of progress in these trials remains uncertain.

Cash Flows

The following table shows a summary of our cash flows for the years ended December 31, 2011, 2012 and 2013 and for the six months ended June 30, 2013 and 2014 (in thousands):

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	2011	2012	2013	2013	2014
				(unaudited)	
Net cash provided by (used in) operating activities	$ (13,689)	$ 45,573	$ (3,322)	$ (5,614)	$ (3,067)
Net cash provided by (used in) investing activities	13,889	491	(11,472)	(68)	1,125
Net cash provided by (used in) financing activities	2	—	(4,391)	(1,697)	(726)

Operating Activities

During the six months ended June 30, 2014, net cash used in operating activities totaled $3.1 million. Our net income of $2.6 million was offset by a significant decrease in deferred revenue and operating liabilities.

During the six months ended June 30, 2013, net cash used in operating activities totaled $5.6 million. Our net income of $3.1 million was offset by a significant decrease in deferred revenue and decrease in other operating assets.

During the year ended December 31, 2013, net cash used in operating activities totaled $3.3 million. Our net income of $12.0 million was offset by a significant decrease in deferred revenue and other changes in working capital.

During the year ended December 31, 2012, operating activities provided $45.6 million of cash. This cash flow from operations resulted from the $41.0 million payment received from Teva and the collection of the $10.0 million receivable for the upfront payment from the Genentech collaboration, partially offset by our net loss of $4.3 million. Our accounts payable and accrued liabilities were affected by the timing of payments to our vendors and additional accruals for our research activities.

During the year ended December 31, 2011, operating activities used $13.7 million of cash, primarily as a result of our net loss for the year of $12.0 million and the net impact of the Genentech collaboration and our recording of the receivable and deferred revenue of the upfront payment of $10.0 million.

Investing Activities

During the six months ended June 30, 2014, net cash provided by investing activities was $1.1 million and consisted primarily of cash received from the sale of marketable securities, partially offset by cash used to purchase property, plant and equipment and marketable securities.

During the six months ended June 30, 2013, net cash used in investing activities was $0.1 million and consisted primarily of purchases of property, plant and equipment.

During the year ended December 31, 2013, net cash used in investing activities was $11.5 million and consisted primarily of purchases of marketable securities of $17.9 million, partially offset by proceeds from marketable securities of $6.6 million.

For the year ended December 31, 2012, net cash provided by investing activities was $0.5 million and consisted primarily of cash received from the sale of marketable securities of $1.0 million, partially offset by purchases of property, plant and equipment of $0.5 million.

For the year ended December 31, 2011, net cash provided by investing activities was $13.9 million and consisted primarily of cash received from the sale of marketable securities of $14.2 million, partially offset by purchases of property, plant and equipment of $0.3 million.

Financing Activities

During the six months ended June 30, 2014, net cash used for financing activities was $0.7 million, which consisted primarily of additional deferred financing costs.

During the six months ended June 30, 2013, net cash used for financing activities was $1.7 million, which consisted of repayment of the note we issued to Isis in connection with our collaboration agreement.

During the year ended December 31, 2013, net cash used for financing activities was $4.4 million, which consisted of $2.7 million in deferred financing costs and $1.7 million for repayment of the note we issued to Isis in connection with our collaboration agreement.

Net cash provided by financing activities for the years ended December 31, 2011 and 2012 were related to the exercise of stock options and was less than $2,000 for each period.

Contractual Obligations and Commitments

The following summarizes our significant contractual obligations as of June 30, 2014 (in thousands):

CONTRACTUAL OBLIGATIONS	TOTAL	LESS THAN 1 YEAR	1 TO 3 YEARS	3 TO 5 YEARS	MORE THAN 5 YEARS
Operating leases [1]	$ 8,568	$ 527	$ 2,106	$ 2,248	$ 3,687

[1] Represents future minimum lease payments under an operating lease in effect as of June 30, 2014 for our current facility in Burnaby, British Columbia, Canada.

The contractual obligations table above excludes potential future payments we may be required to make if we elect to opt into the co-development arrangement under our collaboration with Merck or the co-promotion for TV-45070 under our collaboration with Teva. Our potential payment obligations in the single-digit percentage range to UBC related to amounts we receive from sales of Glybera are also excluded from the table. Additionally, the table does not include our potential royalty and milestone payment obligations to MUN pursuant to the Restated Collaborative Research & License Agreement by and between us and MUN dated December 2006. Pursuant to this agreement, we are obligated to pay MUN certain milestone payments and a single-digit percentage royalty of net sales for products that we sell directly and a single-digit percentage of royalties we receive from sales on products under our pain program.

Inflation

We do not believe that inflation had a material effect on our business, financial condition or results of operations in the last three fiscal years. If our costs were to become subject to significant inflationary pressures, we may be able to offset higher costs through revenue increases. Our inability to do so could harm our business, financial condition and results of operations.

Off-Balance Sheet Arrangements

We do not engage in any off-balance sheet financing activities. We do not have any interest in entities referred to as variable interest entities, which include special purposes entities and other structured finance entities.

Related Party Transactions

For a description of our related party transactions, see “Certain Relationships and Related Party Transactions.”

Recent Accounting Pronouncements

In July 2013, the FASB issued ASU 2013-11, Income Taxes (ASC 740) Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carry forward, a Similar Tax Loss, or a Tax Credit Carry forward Exists (Update). The update is intended to eliminate the diversity in practice of the presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. The update is effective for annual and interim financial statements for fiscal years beginning after December 15, 2013. The amendments should be applied prospectively to all unrecognized tax benefits that exist at the effective date. Retrospective application is permitted. We adopted this standard as of January 1, 2014 and its adoption did not have a material impact on our financial position or results of operations for the six months ended June 30, 2014.

In May 2014, the FASB issued amendments to develop a common revenue standard for U.S. GAAP. These amendments provide the following: a) remove inconsistencies and weaknesses in revenue requirements, b) provide a more robust framework for addressing revenue issues, c) improve comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets, d) provide more useful information to users of financial statements through improved disclosure requirements, and e) simplify the preparation of financial statements by reducing the number of requirements to which an entity must refer. These amendments will be effective for public entities for reporting periods beginning after December 15, 2016. We are in the process of evaluating the impact of the adoption of the amendments on the Company’s financial position, results of operations and cash flows.

The Jumpstart Our Business Startups Act of 2012, or JOBS Act, provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. However, we are choosing to “opt out” of such extended transition period, and as a result, we will comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. Section 107 of the JOBS Act provides that our decision to opt out of the extended transition period for complying with new or revised accounting standards is irrevocable.

Quantitative and Qualitative Disclosure About Market Risk

We are exposed to various market risks in the ordinary course of our business, including changes in interest rates and currency exchange rates. Market risk is the potential loss arising from adverse changes in interest rates and exchange rates.

Foreign Currency Exchange Risk

The principal market risk we face is foreign currency exchange rate risk. We face this risk, in part, as a result of entering into transactions denominated in currencies other than Canadian dollars, particularly those denominated in U.S. dollars and Euros. We also hold non-Canadian dollar denominated cash and cash equivalents, accounts receivable and accounts payable, which are primarily denominated in U.S. dollars.

Changes in foreign currency exchange rates can create significant foreign exchange gains or losses to us. Our current foreign currency risk is primarily with the U.S. dollar as a majority of our non-Canadian dollar denominated expenses are denominated in U.S. dollars. To limit our exposure to volatility in currency markets, we estimate our anticipated

expenses that will be denominated in currencies other than the Canadian dollar and then purchase a corresponding amount of the relevant foreign currency at the current spot rate. Once these estimated expense amounts are acquired, we do not hedge our exposure and thus assume the risk of future gains or losses on the amounts of foreign currency held. The impact of an adverse change in foreign exchange rates may be offset in the event we receive a milestone payment from a foreign collaborator. At June 30, 2014, we held cash and cash equivalents of $8.4 million denominated in U.S. dollars. A hypothetical 10% increase (decrease) in the value of the U.S. dollar would result in a foreign exchange gain (loss) of $0.8 million being recorded in the Statement of Operations on the translation of these U.S. dollar cash and cash equivalent balances into the Canadian dollar functional currency.

Interest Rate Risk

An additional market risk we face is interest rate risk. We had cash, cash equivalents and marketable securities of $44.7 million as of June 30, 2014. The goals of our investment policy are liquidity and capital preservation; we do not enter into investments for trading or speculative purposes and have not used any derivative financial instruments to manage our interest rate exposure. We believe that we do not have any material exposure to changes in the fair value of these assets as a result of changes in interest rates due to the short term nature of our cash, cash equivalents and marketable securities. Declines in interest rates, however, would reduce future investment income. A 10% change in interest rates during any of the periods presented would not have had a material impact on our financial statements. Such interest-earning instruments carry a degree of interest rate risk. We had no outstanding debt as of June 30, 2014.

BUSINESS

Overview

We are a clinical-stage biopharmaceutical company discovering and developing a pipeline of differentiated therapeutics for orphan indications that we intend to commercialize on our own, and for larger market indications that we intend to partner with global pharmaceutical companies. We have built a core enabling discovery platform for the discovery of validated drug targets by studying rare human diseases with extreme traits, including diseases caused by mutations in ion channels, known as channelopathies. We have an integrated platform that includes in-house capabilities for human genetics, small molecule drug discovery, and preclinical and clinical development.

Our business was founded on our proprietary discovery platform, which we refer to as Extreme Genetics. Extreme Genetics involves the study of families where individuals exhibit inherited severe traits, or phenotypes. By identifying and characterizing single-gene defects responsible for these phenotypes, we gain insights into human disease biology to better select targets for therapeutic intervention. Our Extreme Genetics discovery platform has yielded the first approved gene therapy product in the European Union, or the EU, a broad development pipeline and multiple pharmaceutical partnerships.

Our pharmaceutical partners include Teva Pharmaceutical Industries, Ltd., or Teva (through its subsidiary, Ivax International GmbH), Genentech, Inc., or Genentech, and Merck & Co., Inc., or Merck (through its affiliate, Essex Chemie AG). Our pharmaceutical collaborations have generated in aggregate over $140.0 million in non-equity funding to date with the potential to provide us with over $1.0 billion in future milestone payments, as well as royalties and co-promotion income on product sales.

To date, our Extreme Genetics discovery platform has yielded:

- Glybera, developed by our licensee uniQure Biopharma B.V., or uniQure, the first, and currently the only, gene therapy approved in the EU for the treatment of the orphan disorder lipoprotein lipase deficiency, or LPLD;
- TV-45070 (formerly XEN402), a product candidate with four Phase 2 proof-of-concept clinical trials completed. Our partner Teva is conducting a 300-patient, randomized Phase 2b clinical trial in osteoarthritis, or OA, of the knee and is planning clinical development in neuropathic pain indications, including postherpetic neuralgia, or PHN;
- GDC-0276, a product candidate being developed in collaboration with Genentech for the treatment of pain. In September 2014, Genentech initiated a Phase 1 clinical trial for GDC-0276; and
- preclinical programs including a sodium channel inhibitor for the orphan disorder Dravet Syndrome, or DS, and XEN801, a stearoyl Co-A desaturase, or SCD1, inhibitor for the treatment of acne. We anticipate filing an investigational new drug application, or IND, for XEN801 in the first half of 2015 and an IND for our DS program in 2016.

We believe our Extreme Genetics discovery platform enhances the likelihood of discovering a drug target that has a major effect in humans. From these discoveries, we can gain an improved understanding of how a drug that modulates the target might act when given to a human.

The selection of suitable families with rare phenotypes is integral to our successful identification of single-gene defects. Such families are rare and dispersed throughout the world, which makes accessing and studying such families a challenge. We have developed internal clinical genetics expertise allowing us to identify and access rare families. To date, we have established a global network that has included more than 30 clinical collaborations in multiple countries. We collect DNA and detailed clinical information from the selected families to which we then apply our in-house genetics, molecular biology and bioinformatics capabilities to identify the single-gene defect. Using these genetic insights, we apply our in-house, small-molecule expertise as well as access other therapeutic modalities, with the goal of developing novel medicines.

A significant focus of our Extreme Genetics discovery platform has been human channelopathies. This focus has enabled us to develop strong capabilities in small-molecule ion channel drug discovery. Our ion channel discovery capability is based on our understanding of the genetics of channelopathies combined with our proprietary medicinal chemistry assets and know-how. We have been able to discover new binding sites on ion channels which, in turn, has led to the discovery of highly-selective voltage-gated ion channel inhibitors, which may have safety and efficacy advantages over non-selective inhibitors.

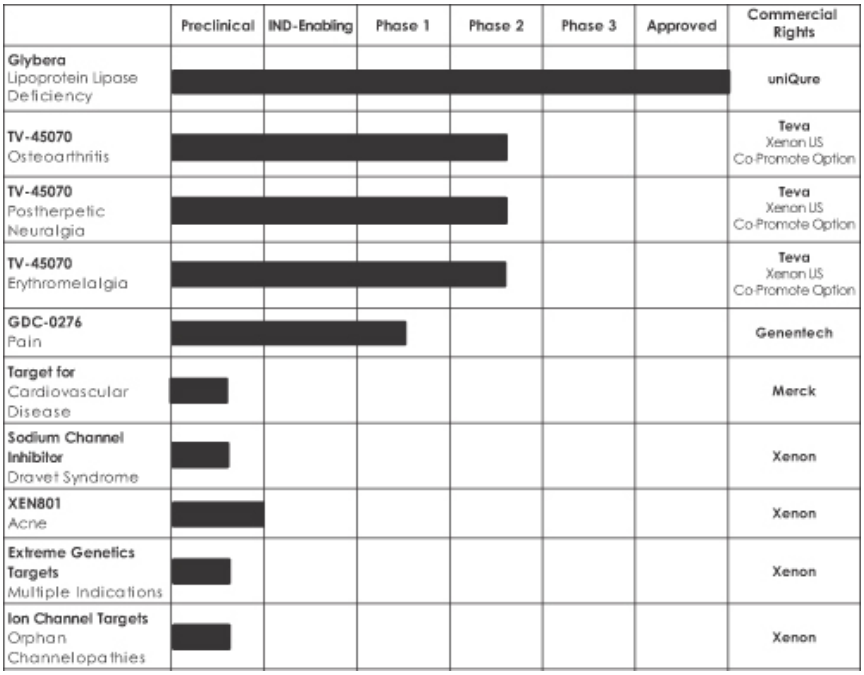
While the pharmaceutical industry has shown interest in channelopathies, a general inability to target ion channels selectively with a pharmaceutical agent has been a limitation to the development of effective therapeutics. The efficacy of non-selective ion channel inhibitors has generally been limited by the adverse events observed at high doses due to the broad non-selective binding of such agents. We believe we have developed a core competence in developing highly-selective small-molecule ion channel inhibitors, and we believe we can use this know-how to develop a pipeline of novel ion channel inhibitors for diseases in areas of high unmet medical need.

We discovered that deficiency of the voltage-gated sodium channel Nav1.7 is present in the rare human disease called congenital indifference to pain, or CIP. Individuals with CIP are unable to feel pain. This relationship indicated that Nav1.7 may be a key mechanism for the development of novel analgesics. We are pursuing this mechanism in separate partnerships with Teva and with Genentech.

Similarly, with our collaborators from McGill University, we identified the genetic link between rare human epilepsies and mutations in the Nav1.1 sodium channel. These genetic epilepsy discoveries helped to define our therapeutic selective ion channel strategy for DS. We believe that our Extreme Genetics discovery platform provides the opportunity to validate additional ion channel targets for both prevalent and orphan indications.

Our Pipeline

The following is a summary of our current product pipeline:



Approved Product

Glybera

Glybera is the first and currently the only gene therapy product to receive commercial approval in the EU. It is specifically indicated for the treatment of a subset of adult patients with the orphan lipid disorder LPLD, confirmed by genetic testing and suffering from severe or multiple pancreatitis attacks, despite dietary fat restrictions. LPLD is a severe metabolic disease of inadequate lipid metabolism resulting in pancreatitis and in some cases, death. Together with collaborators from the University of British Columbia, or UBC, we demonstrated that humans with a single gene variant of the lipoprotein lipase, or LPL, gene called LPL^{S447X}, resulted in increased LPL enzyme activity leading to reduced triglyceride levels. Under our sublicense and research agreement with uniQure, we collaborated with uniQure and UBC on preclinical activities, and thereafter uniQure developed an LPL gene therapy product, Glybera, which contains the LPL^{S447X} variant. We believe that the introduction of the therapeutic LPL^{S447X} gene through administration of Glybera provides a clinical benefit for a subset of LPLD patients.

Glybera is the first product whose active ingredient was derived from our platform to receive commercial approval. The goal of Glybera therapy is to treat LPLD in order to achieve sustained improvement of clearance of triglyceride-rich lipid particles known as chylomicrons, and to significantly reduce the risk of pancreatitis attacks in patients suffering from multiple recurrent pancreatitis and abdominal pain events. Glybera was developed by our licensee, uniQure. In 2012, Glybera was approved in the EU, and in July 2013, uniQure announced that it had entered into a partnership with Chiesi Farmaceutici S.p.A., or Chiesi, for the commercialization of Glybera in the EU and more than a dozen other countries including Brazil, China, Mexico and Russia. We believe that Chiesi plans to launch Glybera in the fourth quarter of 2014 or the first quarter of 2015 in Europe, and that uniQure is pursuing a U.S. product approval strategy, with plans to file a Biologics License Application, or BLA, with the U.S. Food and Drug Administration, or the FDA, following receipt of the results from a planned Phase 4 trial expected to begin in mid-2015. Glybera has received both fast track and orphan drug designations for the treatment of LPLD in both the EU and the U.S.

We are eligible to receive mid single-digit royalties on net sales of the licensed products, for sales made by uniQure and its affiliates. The royalty rates are reduced to a low single-digit for sales made by uniQure and its affiliates in countries where a licensed technology or a licensed product is not covered by a valid patent claim. With respect to uniQure's sublicense to Chiesi, we are eligible to receive a percentage in the low twenties of all non-royalty compensation relating to the licensed technology or products that uniQure receives from Chiesi (for example upfront payments and milestone payments), a percentage in the low twenties of any royalties that uniQure receives from Chiesi based on sales of technology or products covered by the licensed patents, plus a mid single-digit percentage of certain further royalties that uniQure receives from Chiesi based on sales of our licensed technology or products after the expiration of all licensed patents covering the product.

Product Candidates in Development

TV-45070 for the Treatment of Pain

TV-45070 (formerly XEN402) is a small-molecule inhibitor of the sodium channel Nav1.7 and other sodium channels, including those that are expressed in the pain-sensing peripheral nervous system. TV-45070 has potentially broad application in nociceptive pain, mediated by damage or injury to tissues, including the pain sensitivity caused by inflammation, and neuropathic pain mediated by damage, dysfunction or injury of nerves. TV-45070 is partnered with Teva. Pursuant to the terms of the agreement, Teva is obligated to complete three Phase 2 or later stage clinical trials. Using a topical ointment formulation of TV-45070, Teva has initiated a 300-patient, randomized Phase 2b clinical trial in OA of the knee with data expected in the third quarter of 2015. Teva is also developing topical TV-45070 in neuropathic pain indications, and is planning a Phase 2b clinical trial in patients with PHN that is expected to start in the first half of 2015. In addition, we are working with Teva to evaluate the opportunity to develop TV-45070 for the orphan disease erythromelalgia, or EM. TV-45070 has received orphan designation from the FDA for the treatment of EM. We selected Nav1.7 as a drug target after we discovered that the Nav1.7 protein is deficient in the rare human disease called congenital indifference to pain, or CIP, where humans suffering from CIP are unable to feel pain. We have observed promising evidence of activity for TV-45070 in four Phase 2 proof-of-concept clinical trials, including two trials in EM, one trial in PHN and one trial in dental pain, a form of nociceptive pain.

In December 2012, we entered into a collaborative development and license agreement with Teva, through its subsidiary, Ivax International GmbH, or Ivax, pursuant to which we granted Teva an exclusive worldwide license to develop and commercialize TV-45070. Prior to our entry into the collaborative development and license agreement with Teva, we submitted INDs to the FDA for oral TV-45070 for the indication of dental pain (July 2009) and topical TV-45070 for the indication of acute and chronic pain, including neuropathic and inflammatory pain (July 2010). Teva submitted an IND to the FDA for topical TV-45070 for the symptomatic treatment of OA (November 2013). Under the terms of the agreement, Teva made an upfront payment to us of $41.0 million. In addition, we are eligible to receive potential milestone payments totaling up to $335.0 million, comprised of a $20.0 million clinical milestone payment, up to $285.0 million in regulatory milestone payments, and a $30.0 million sales-based milestone payment. If TV-45070 is approved, we are also eligible to receive royalties in the low teens to the low twenties on net sales of the licensed products for the timeframe that such products are covered by the licensed patents and in certain other instances. We also have an option to co-promote products in the U.S.

GDC-0276 and Other Selective Inhibitors of Nav1.7 for the Treatment of Pain

In December 2011, we entered into a collaborative research and license agreement with Genentech and its affiliate, F. Hoffmann-La Roche Ltd, or Roche, to discover and develop selective oral inhibitors of Nav1.7 for the treatment of pain. Based on our discovery of Nav1.7 deficiency underlying CIP, we believe that Nav1.7 is a highly-validated target for the treatment of pain. Our Genentech collaboration is focused on discovering and developing selective oral Nav1.7 inhibitors, which is in contrast to our Teva partnership that is focused on developing a topical drug that targets a number of different sodium channels, including Nav1.7. The first small molecule, preclinical product candidate that was selected for development under our collaboration is GDC-0276. In September 2014, Genentech initiated a Phase 1 clinical trial for GDC-0276.

Under the terms of the agreement, Genentech paid us an upfront fee of $10.0 million, a $5.0 million milestone payment for the selection of GDC-0276 for development and an $8.0 million milestone payment upon the approval by Health Canada of the Clinical Trial Application, or CTA, for GDC-0276. We are also eligible to receive pre-commercial and commercial milestone payments with respect to the licensed products totaling up to an additional $613.0 million, comprised of up to $45.5 million in preclinical and clinical milestone payments, up to $387.5 million in regulatory milestone payments, and up to $180.0 million in sales-based milestone payments for multiple products and indications. In addition, we are also eligible to receive royalties based on net sales of the licensed products, which range from a mid single-digit percentage to ten percent for small-molecule inhibitors for the timeframe that such products are covered by the licensed patents and a low single-digit percentage thereafter, plus a low single-digit percentage for large-molecule inhibitors of Nav1.7.

Chronic pain conditions, such as severe cancer pain and neuropathic pain, are generally recognized as unmet medical needs providing potential commercial opportunities for a new oral pain drug. Currently available pain drugs often have either a lack of meaningful pain relief or dose-limiting side effects for many patients. An orally administered selective Nav1.7 inhibitor could present a novel mechanism for the treatment of moderate to severe pain as a single agent or in combination with existing analgesics that work through different mechanisms.

Product Candidates in Discovery

Selective Small-Molecule Sodium Channel Inhibitors for the Treatment of Dravet Syndrome

We are developing selective inhibitors of the voltage-gated sodium channel Nav1.6 as a treatment for the orphan disease Dravet Syndrome, or DS. We have developed considerable expertise in voltage-gated sodium channel biology and have accumulated significant experience in the development of selective sodium channel inhibitors. We are leveraging this expertise and chemistry know-how for the development of selective inhibitors of Nav1.6 for the treatment of DS.

DS is a severe form of childhood epilepsy that typically causes mental retardation and, in approximately 10% of cases, premature death before the age of 12 years. The frequency of DS in the U.S. has been estimated to be one in 20,000 to 40,000 births, which, when applied to U.S. federal census data, correlates to approximately 7,500 to 15,000 patients with DS in the U.S.

With our collaborators from McGill University, we identified the genetic link between rare human epilepsy and mutations in the Nav1.1 gene. It is now estimated that approximately 80% of DS cases are believed to be due to

mutations in one copy of the Nav1.1 voltage-gated sodium channel that cause a partial loss of Nav1.1 function. Nav1.1 plays a critical role in the normal functioning of inhibitory pathways in the brain. The lack of fully functioning Nav1.1 and inhibitory pathways allows the brain excitatory pathways to be unopposed resulting in the severe seizures of DS. The brain excitatory pathways are preferentially mediated by the voltage-gated sodium channel Nav1.6, and therefore if we are able to selectively inhibit Nav1.6 with a small-molecule compound, we expect to taper this neuronal excitation and thereby treat DS. To further support inhibiting Nav1.6 as a potential therapeutic approach to treat DS, published data has shown that seizures and premature death observed in a DS mouse model can be corrected when these animals are bred with a Nav1.6 knockout mouse.

DS is one of the most resistant epilepsies to treatment. Some benefit has been reported for drugs that increase the activity of the inhibitory brain pathways such as benzodiazepines and Stiripentol, while non-selective sodium channel blockers such as lamotrigine are contraindicated as they may worsen seizures due to further inhibition of Nav1.1. Other intractable childhood seizures that have been associated with genetically-linked partial loss of function of Nav1.1 or gain of function of Nav1.6 may benefit from a selective inhibitor of Nav1.6 include intractable childhood epilepsy with generalized tonic-clonic seizures and sporadic infantile epileptic encephalopathy.

Based on our experience and know-how in developing selective ion channel inhibitors, we have identified potent, selective Nav1.6 inhibitors. We have demonstrated efficacy for seizures in an animal model with such an inhibitor. We anticipate filing an IND for a drug candidate to treat DS in 2016. Given the orphan nature of this disorder, we believe that DS may represent an attractive opportunity for us to advance independently.

XEN801 for the Treatment of Acne

XEN801 is a selective, small molecule inhibitor of SCD1 being developed for the treatment of moderate to severe acne. SCD1 is an enzyme involved in lipid synthesis that is expressed in sebaceous glands in the skin. Mice deficient in SCD1 have a marked phenotype of sebaceous gland atrophy suggesting that inhibition of SCD1 activity in the skin may provide a novel treatment option for disorders of enlarged or overactive sebaceous glands, including acne. We have discovered and developed novel small-molecule SCD1 inhibitors to which we have sole rights. In multiple animal models, we have shown that our SCD1 inhibitors can reduce the size and number of sebaceous glands. XEN801 has demonstrated good properties for topical administration including formulation in a light gel and adequate skin penetration in multiple animal species.

We anticipate selecting a development candidate for IND-enabling studies in the second half of 2014, filing an IND to initiate a Phase 1 trial in the first half of 2015 and initiating a proof-of-concept Phase 2 trial in the second half of 2015. We believe a selective, small-molecule inhibitor of SCD1 has therapeutic potential for skin disorders such as moderate to severe acne, seborrhoea and sebaceous hyperplasia.

Selective Small-Molecule Inhibitors of Targets for the Treatment of Cardiovascular Disease

We entered into a collaborative research and option agreement with Merck in June 2009 to discover novel targets and compounds for the treatment of cardiovascular disease using our Extreme Genetics discovery platform. In 2012, Merck exercised its option to obtain an exclusive license to a target for cardiovascular disease and compound inhibitors that were discovered during the research collaboration. The target, when inhibited, is predicted to provide a beneficial lipid profile with the goal of protecting from cardiovascular disease.

New Pipeline Opportunities

Given the commercial opportunity and the pharmaceutical industry's interest in the pain market, we are using our Extreme Genetics discovery platform and specialized insights into the biology of pain to identify new drug targets for this common medical problem. We formed a second collaboration with Genentech in March 2014 for pain genetics, pursuant to which we intend to focus on rare phenotypes where individuals have an inability to perceive pain or where individuals have non-precipitated spontaneous severe pain. We believe these phenotypes may unlock new key molecular regulators of pain signaling in humans, which we will seek to validate as targets for new pain drugs. For example, we are analyzing CIP families that are not explained by Nav1.7 deficiency as well as families with severe pain phenotypes, such as paroxysmal extreme pain disorder, or PEPD, inherited EM and cluster headache.

In addition to our study of rare human disorders of extreme pain or the absence of pain, we are studying other rare disorders with extreme phenotypes that we believe could yield new drug targets in disorders where high medical need exists, such as neurological disorders like essential tremor.

In addition, given our expertise in ion channel drug discovery, we are also focusing our discovery efforts on the identification of ion channel targets where we believe novel selective inhibitors might represent significant therapeutic advances with a focus on orphan indications.

Our Strategy

Our goal is to build a self-sustaining, fully-integrated and profitable company that discovers, develops and commercializes innovative therapeutics, including novel selective ion channel inhibitors, by applying our expertise in the genetics of rare human diseases.

Since our inception, we believe we have operated in a capital-efficient manner to build our capabilities and assets through phased growth, expansion and value creation. Since our last venture capital financing in 2006, we have funded our operations and expanded our platform, product pipeline and infrastructure through a strategy which combines the deployment of our own resources and the establishment of broadly enabling and well-structured pharmaceutical partnerships with industry leaders.

Our strategy is to:

- *Expand our pipeline and advance multiple discovery and development programs, focusing on orphan and niche disease market opportunities that we can independently develop and commercialize.* We believe that focusing on orphan indications will allow us to benefit from both a less costly and expedited development pathway and may provide us with potential commercial benefits, including market exclusivity and premium drug pricing. This focus may also allow us to retain a significantly larger share of the value of such product candidates, as it may be viable for us to develop these assets independently. To prepare for this independent development, we intend to build a late-stage development and commercialization infrastructure. Our goal is to expand our development and regulatory capabilities to enable us to conduct clinical trials, including late-stage testing beyond Phase 2 trials, in selected orphan indications. Where we expect to be able to cost-effectively commercialize approved products in orphan markets, we intend to build a specialized sales force.
- *Selectively establish additional partnerships enabling us to access large commercial indications while leveraging the benefits of those collaborations to expand our internal capabilities.* Through our collaboration with Teva, we have gained access to significant late-stage development resources for topical TV-45070 with a pharmaceutical company that has an established commercial franchise in the large pain therapeutics market. This collaboration provided us with a significant upfront payment, the opportunity to achieve substantial additional milestone payments, most of which are for pre-commercial activities, and recurring royalties and potential commercial participation through an option for a co-promotion interest.

  Our collaboration with Genentech enables a broader and potentially more efficient development pathway than we could have achieved independently in the competitive Nav1.7 drug development space. The collaboration has also strengthened our expertise in the chemistry of selective ion channel inhibitors and our ion channel drug discovery infrastructure. We have increased the scope of our relationship with Genentech by establishing a second collaboration that seeks to use our Extreme Genetics discovery platform to identify new drug targets for pain drugs. This second collaboration may enable us to pursue a larger discovery effort and to compete more effectively by combining Genentech's expertise with our own and, if successful, may lead to future joint drug discovery collaborations.
- *Further leverage our discovery platform and insights into disease biology to identify novel targets and develop next-generation products.* Our Extreme Genetics discovery platform enables us to discover biologically relevant drug targets. By identifying and studying rare individuals and families with severe phenotypes, we can potentially discover single-gene defects and obtain critical insights into the genes underlying these diseases and their related biology. This information enables us to initiate our drug discovery efforts with the advantage of having a better understanding of the role of the drug target in human disease. We believe that our Extreme Genetics discovery platform for target selection is differentiated and advantageous to other target selection methods commonly employed in the industry, as it has previously identified genes that are determinant or causal of a disease.

Our ion channel discovery capability is founded upon our understanding of the genetics of channelopathies combined with our proprietary medicinal chemistry assets and know-how. We have been able to identify new binding sites on ion channels which, in turn, has led to the discovery of highly-selective, voltage-gated ion channel inhibitors which may have safety and efficacy advantages over non-selective inhibitors. We discovered that deficiency of the voltage-gated sodium channel Nav1.7 is present in CIP. Individuals with CIP are unable to feel pain. This relationship indicated that Nav1.7 may be a key mechanism for the development of novel analgesics. We are pursuing this mechanism in separate partnerships with Teva and with Genentech.

Similarly, with our collaborators from McGill University, we identified the genetic link between rare human epilepsies and mutations in the Nav1.1 sodium channel. These genetic epilepsy discoveries helped to define our therapeutic selective ion channel strategy for the orphan disease DS. Through our Extreme Genetics discovery platform, we believe we have the opportunity to validate additional ion channel targets for both prevalent and orphan indications.

Our Extreme Genetics Discovery Platform

Despite advances in medical sciences and the pharmaceutical industry's understanding of diseases, research and development productivity in the industry has declined over the years. We believe that a contributor to this problem is the industry's reliance on drug discovery approaches that are sometimes based on targets that do not necessarily have a major biological effect in humans. Consequently, it is fairly common for a pharmaceutical company to invest substantial time, resources and funds into drug development only to realize in late-stage clinical trials that a product candidate may be directed to a target that is either not biologically relevant to the disease or that may have diverse functions or effects in humans, thereby leading to poor efficacy or safety.

Our Extreme Genetics discovery platform enables us to identify drug targets that may be more biologically relevant in humans. Our platform is built on the foundation of identifying and studying rare individuals and families with severe phenotypes to discover single-gene defects that have major biological effects in humans. By studying these individuals and families with severe phenotypes, we can obtain critical insights into the genes underlying these diseases and their related biology to develop promising product candidates. We therefore are able to initiate our drug discovery with the advantage of having a greater understanding of the role of the drug target in human disease.

Our reliance on our Extreme Genetics discovery platform for target selection differs from other target selection methods commonly employed in the industry, such as *in vitro* cell biology and screening, tissue and differential expression studies, *in vitro* and animal based pharmacology and the use of animal models, such as gene knock-outs or animal transgenics. Some companies, however, do use human genetics to varying degrees to assist with target identification, such as approaches where larger populations of patients and controls are studied to define associations where a disease and single nucleotide polymorphisms, or SNPs, in certain genes are linked. While SNP associations allow the identifications of genes that show an association with a disease or may increase risk of disease, such associations differ from our Extreme Genetics discovery platform since they do not discover genes that are determinant or causal of a disease. By studying families with rare diseases where individuals present with severe phenotypes, we seek to isolate the genetic cause of such diseases. We then use this causal information as our primary methodology underlying our target discovery and selection.

The key components of our Extreme Genetics discovery platform include:

- an established global network that has included more than 30 clinical collaborators in multiple countries, and which has provided us with access to rare individuals and families with severe phenotypes dispersed throughout the world;
- clinical geneticists and genetic counselors with a deep understanding of clinical phenotypes. These experts identify the rare genetic disorders with severe phenotypes that we study;
- years of experience and extensive know-how in successfully navigating through regulations in multiple countries in order to obtain the approvals necessary to collect and use detailed clinical information and DNA samples from individuals and families with severe phenotypes;
- internal capabilities in genome sequencing, molecular biology and bioinformatics to enable identification of single-gene defects and validation of these as potential drug targets; and

- expertise in small-molecule drug discovery to design promising product candidates that effectively modulate the identified drug targets. Our drug discovery capabilities include medicinal and synthetic chemistry, assay development and *in vitro* and *in vivo* pharmacology.

Our Extreme Genetics discovery platform has proven to be a valuable asset for our company over the years. It has led to a robust pipeline, including an approved product, two development programs, and three preclinical programs. Our platform has also allowed us to attract numerous collaborations with leading pharmaceutical companies, including Teva, Genentech, and Merck, that have in aggregate generated more than $140.0 million in non-equity funding through June 30, 2014 and provide us with research funding and the potential for more than $1.0 billion of research, development, regulatory and sales-based milestone payments, as well as royalties on net product sales.

A significant focus of our Extreme Genetics discovery platform has been human channelopathies, enabling us to developed strong capabilities in small molecule ion channel drug discovery. Our ion channel discovery capability is founded upon our understanding of the genetics of channelopathies combined with our proprietary medicinal chemistry assets and know-how. We have been able to identify new binding sites on ion channels which, in turn, has led to the discovery of highly-selective voltage-gated ion channel inhibitors which may have safety and efficacy advantages over non-selective inhibitors.

While the pharmaceutical industry has shown significant interest in channelopathies, a general inability to target ion channels selectively with a pharmaceutical agent has been a limitation to the development of effective therapeutics. We believe we have developed a core competence in developing highly-selective small-molecule ion channel inhibitors, and we believe we can use this know-how to develop a pipeline of novel ion channel inhibitors for diseases in areas of high unmet medical need.

Programs

Glybera (alipogene tiparvovec): A Gene Therapy for the Orphan Disease LPLD

Glybera is a gene therapy approved in the EU in October 2012 for the treatment of a subset of patients with the orphan lipid disorder LPLD. Specifically, it is intended to treat LPLD in patients with severe or multiple pancreatitis attacks, despite dietary fat restrictions. LPLD is a severe metabolic disease of inadequate lipid metabolism, resulting in pancreatitis and in some cases, death. In collaboration with UBC, we demonstrated that humans with a variant of the LPL gene called LPL^{S447X} resulted in increased LPL enzyme activity leading to reduced triglyceride levels. Under our sublicense and research agreement with uniQure, we collaborated with uniQure and UBC on preclinical activities, and thereafter uniQure developed a LPL gene therapy product, Glybera, which contains the LPL^{S447X} variant. We believe that the introduction of the therapeutic LPL^{S447X} gene through administration of Glybera provides a clinical benefit for LPLD patients.

Glybera is the first product whose active ingredient was derived from our platform to receive commercial approval and is the first gene therapy to be approved in the EU or North America. The goal of Glybera therapy is to treat LPLD in order to achieve sustained improvement of clearance of triglyceride-rich lipid particles known as chylomicrons, and to significantly reduce the risk of pancreatitis attacks in patients suffering from multiple recurrent pancreatitis and abdominal pain events. Glybera was developed by our licensee, uniQure. In 2012, Glybera was approved in the EU for the orphan disorder LPLD to treat patients with severe or multiple pancreatitis attacks. In July 2013, uniQure announced that it had entered into a partnership with Chiesi for the commercialization of Glybera in the EU and more than a dozen other countries including Brazil, China, Mexico and Russia. We believe that Chiesi plans to launch Glybera in the fourth quarter of 2014 or the first quarter of 2015 in Europe, and that uniQure is pursuing a U.S. product approval strategy with plans to file a BLA with the FDA following receipt of the results from a planned Phase 4 trial expected to begin in mid-2015. Glybera has received orphan drug designation for the treatment of LPLD in both the EU and the U.S. We are eligible to receive mid single-digit royalties on net sales of the licensed products, for sales made by uniQure and its affiliates. The royalty rates are reduced to a low single-digit for sales made by uniQure and its affiliates in countries where a licensed technology or a licensed product is not covered by a valid patent claim. With respect to uniQure's sublicense to Chiesi, we are eligible to receive a percentage in the low twenties of all non-royalty compensation relating to the licensed technology or products that uniQure receives from Chiesi (for example upfront payments and milestone payments), a percentage in the low twenties of any royalties that uniQure receives from Chiesi based on sales of technology or products covered by the licensed patents, plus a mid

single-digit percentage of certain further royalties that uniQure receives from Chiesi based on sales of our licensed technology or products after the expiration of all licensed patents covering the product.

About LPLD

Familial LPLD is a rare autosomal-recessive disorder of lipoprotein metabolism. LPLD is characterized by severe hypertriglyceridemia caused by the absence of LPL activity, and, as a consequence, certain triglyceride-rich lipoproteins accumulate in the plasma. The population frequency of LPLD in the U.S. has been reported to be approximately one in a million individuals by the National Library of Medicine.

LPLD typically manifests early in childhood, with repeated episodes of abdominal pain and acute pancreatitis that can be life-threatening. There is currently no approved gene therapy for LPLD in the U.S. The current management of LPLD consists of strict adherence to an extremely low-fat diet, but compliance with such a diet is challenging. Lipid-lowering drugs are generally not effective for treating LPLD. We believe effective therapeutic strategies are therefore needed for this condition.

About LPL^{S447X}

Together with our collaborators at UBC and using our Extreme Genetics discovery platform, we demonstrated that the LPL^{S447X} variant resulted in reduced triglyceride levels in humans, as this single-gene defect results in elevated LPL enzyme activity and we further demonstrated that LPL^{S447X} in an adenovirus gene therapy could treat hypertriglyceridemia in animal models of LPLD.

Clinical Development of Glybera

In a scientific publication, a single dose of Glybera was well-tolerated with no material safety concerns and was demonstrated to reduce the incidence of acute pancreatitis and abdominal pain events over the two-year study period.

Commercialization of Glybera

In 2012, Glybera was approved in the EU for the orphan disorder LPLD to treat patients with severe or multiple pancreatitis attacks. In July 2013, uniQure announced that it had entered into a partnership with Chiesi for the commercialization of Glybera in the EU and more than a dozen other countries including Brazil, China, Mexico and Russia. We believe that Chiesi plans to launch Glybera in the fourth quarter of 2014 or the first quarter of 2015 in Europe, and that uniQure is pursuing a U.S. product approval strategy with plans to file a BLA with the FDA following receipt of the results from a planned Phase 4 trial expected to begin in mid-2015. Glybera has received orphan drug designation for the treatment of LPLD in both the EU and the U.S.

TV-45070: A Small Molecule for the Treatment of Pain

TV-45070 (formerly XEN402) is a small-molecule inhibitor of the sodium channel Nav1.7 and other sodium channels, including those that are expressed in the pain-sensing peripheral nervous system. TV-45070 has potentially broad application in nociceptive pain, mediated by damage or injury to tissues, including the pain sensitivity caused by inflammation, and neuropathic pain mediated by damage, dysfunction, or injury of nerves. TV-45070 is partnered with Teva. Pursuant to the terms of the agreement, Teva is obligated to complete three Phase 2 or later stage clinical trials. Using a topical ointment formulation of TV-45070, Teva has initiated a 300-patient, randomized Phase 2b clinical trial in OA of the knee, and data are expected in the third quarter of 2015. Teva is also developing topical TV-45070 in neuropathic pain indications, and is planning a Phase 2b clinical trial in patients with PHN that is expected to start in the first half of 2015. In addition, we are working with Teva to evaluate the opportunity to develop TV-45070 for the orphan disease EM. TV-45070 has received both fast track and orphan designations from the FDA for the treatment of EM.

We selected Nav1.7 as a drug target for pain after we discovered that the Nav1.7 protein is deficient in the rare human disease, CIP, where humans suffering from CIP are unable to feel pain. We have observed promising evidence of activity for TV-45070 in four Phase 2 proof-of-concept clinical trials, including two trials in the orphan disease EM, one trial in PHN and one trial in dental pain, a form of nociceptive pain.

In December 2012, we entered into a collaborative development and license agreement with Teva through its subsidiary Ivax, pursuant to which we granted Teva an exclusive worldwide license to develop and commercialize TV-45070. Under the terms of the agreement, Teva made an upfront payment to us of $41.0 million. In addition, we

are eligible to receive potential milestone payments totaling up to $335.0 million, comprised of a $20.0 million clinical milestone payment, up to $285.0 million in regulatory milestone payments, and a sales-based milestone payment of $30.0 million. If TV-45070 is approved, we are also eligible to receive royalties in the low teens to the low twenties on net sales of the licensed products for the timeframe that such products are covered by the licensed patents and in certain other instances. We also have an option to co-promote products in the U.S. Prior to our entry into the collaborative development and license agreement with Teva, we submitted INDs to the FDA for oral TV-45070 for the indication of dental pain (July 2009) and topical TV-45070 for the indication of acute and chronic pain, including neuropathic and inflammatory pain (July 2010). Teva submitted an IND to the FDA for topical TV-45070 for the symptomatic treatment of OA (November 2013).

Discovery of TV-45070 and Mechanism of Action

Using our Extreme Genetics discovery platform, we discovered Nav1.7 by studying families with the rare disorder CIP. CIP patients are unable to feel pain for painful events including fractures, childbirth, osteomyelitis and OA, severe burns, ulcers, wounds and tooth abscesses. Based on this severe phenotype of absence of pain in humans with CIP, we predicted that the single-gene defect causing CIP could define an important novel human drug target for treating pain. We showed that defects in the CIP gene result in deficiency of the sodium channel Nav1.7.

Nav1.7 is highly expressed in peripheral nerves and transmits pain signals. We believe that inhibition of Nav1.7 may reduce these pain signals. TV-45070 was designed to be a non-selective small-molecule inhibitor of Nav1.7 such that it also can inhibit additional sodium channels, including those that we believe play a role in pain signaling. We believe this mixed sodium channel inhibition may enhance the potential efficacy of TV-45070 in chronic pain. TV-45070 is currently being developed as a topical product as its chemical properties are favorable for topical administration, including high local skin and underlying tissue concentrations in tandem with maintenance of low plasma levels. With these properties, we believe we can target the site of generation of peripherally-based pain without unnecessarily exposing other tissues to significant levels of this compound. This is especially true for the central nervous system where we might expect to observe side-effects when multiple sodium channels are inhibited, such as sleepiness, nausea, and dizziness. We have demonstrated efficacy with this compound in multiple animal models for pain including both nociceptive and neuropathic pain models. Topical TV-45070 in animal models has been shown to exhibit anti-inflammatory properties and may be suited to peripherally-based inflammatory pain such as joint arthritic pain. The broad sodium channel inhibition of TV-45070 is in contrast to our selective inhibitors licensed to Genentech, which are selective for Nav1.7 and are being developed as oral formulations.

TV-45070 Clinical Development

Topical and oral formulations of TV-45070 have been studied in Phase 1 clinical trials in healthy volunteers and in four Phase 2 proof-of-concept clinical trials. A 300-patient, randomized Phase 2b clinical trial in OA is ongoing and future clinical development in neuropathic pain is planned.

TV-45070 Phase 1 Clinical Trials

In a topical Phase 1 study, 20 healthy volunteers were dosed once daily for 21 days with 4% and 8% ointment, placebo, a positive control and a 0.9% saline negative control. Topical TV-45070 was generally well tolerated with no clinically meaningful difference observed between cumulative skin irritation scores for 4% and 8% ointment, placebo and the negative saline control. The positive control as expected did show greater skin irritation; there were no serious adverse events, or SAEs, or deaths in this study. All adverse events were moderate or mild in severity with the majority of adverse events related to local skin reactions from the occlusive tape dressings. The most frequently reported adverse events which were not local skin reactions were headache, dizziness, fatigue and oropharyngeal pain. Importantly the average plasma concentrations of TV-45070 were low and, as would be expected, central nervous system side effects were not observed.

To better understand the systemic side effect profile of TV-45070, the drug was also dosed in Phase 1 single and multiple ascending dose studies using a simple liquid-filled capsule for oral administration. The single-ascending dose, or SAD, study was carried out in 38 healthy volunteers dosed up to 800 mg. The multi-ascending dose, or MAD, study was performed in 32 healthy volunteers who were dosed up to 400 mg twice daily for 5.5 days. The maximal tolerated dose, or MTD, for SAD study was 500 mg and dose-limiting toxicity included dizziness and drowsiness observed for the 800 mg single dose, which we believe indicates inhibition of central nervous system expressed sodium channels. The MTD in the MAD study was not achieved and occasional short-lived adverse events of mild to moderate dizziness and drowsiness were reported by some subjects for the 400 mg twice daily dose.

TV-45070 Phase 2 Proof-of-Concept Clinical Trials

We believe that TV-45070, if successfully developed and approved, may have broad market potential as a pain drug. The types of pain that CIP patients cannot perceive suggest that Nav1.7 may be involved in pain signaling for different types of painful stimuli including both nociceptive, such as inflammatory-based pain, and neuropathic pain. The current standards of care for such prevalent forms of pain often provide poor efficacy and dose increases to provide improved efficacy are often limited by poor tolerability including common side effects, such as nausea, dizziness and sleepiness. Certain anti-inflammatory pain medications, including those used to treat OA, have FDA black box warnings for gastrointestinal bleeding and cardiovascular events, both of which can be fatal. Despite currently available treatments for prevalent pain disorders, we believe that there may be subpopulations of pain patients with unmet medical needs, which topical TV-45070 may be able to address given its novel mechanism and local site of action. Given its novel mechanism, we also expect that topical TV-45070 could be used as either a single agent or in combination with other analgesics that work through different mechanisms.

Based on the potential broad utility of TV-45070, prior to our collaboration with Teva, we had conducted four Phase 2 proof-of-concept trials to explore the potential of TV-45070 as a treatment for both nociceptive and neuropathic pain, as well as providing evidence that TV-45070 can block the pain signaling mediated by Nav1.7.

These trials included an oral Phase 2 clinical trial in third molar tooth extraction; a topical Phase 2 clinical trial in postherpetic neuralgia; and two (one oral and one topical) Phase 2 clinical trials in the orphan indication EM. In contrast to the absence of pain in CIP, where Nav1.7 is deficient, over activity of Nav1.7, including genetic gain of function mutations that increase the Nav1.7 mediated pain signaling, can cause the spontaneous pain of primary EM. Furthermore, EM represents a high treatment hurdle as the majority of EM patients do not experience adequate pain relief from current drugs approved for the treatment of pain. Therefore, a demonstration of clinical benefit could represent a new treatment option for EM patients.

Oral TV-45070 Trial in Nociceptive Inflammatory Pain

We conducted a trial for third molar tooth extraction, which is an established acute inflammatory pain model. The data from this proof-of-concept trial support future development of TV-45070 for nociceptive pain indications, including OA.

We performed a randomized, double-blind, placebo-controlled, Phase 2 proof-of-concept trial in 61 healthy male subjects, of which, 41 subjects received a single oral 500 mg dose of TV-45070 and 20 subjects received placebo.

DESIGN

- Double-blind, randomized, placebo-controlled
- 61 subjects randomized
- Single oral dose of 500 mg or placebo

KEY SAFETY DATA

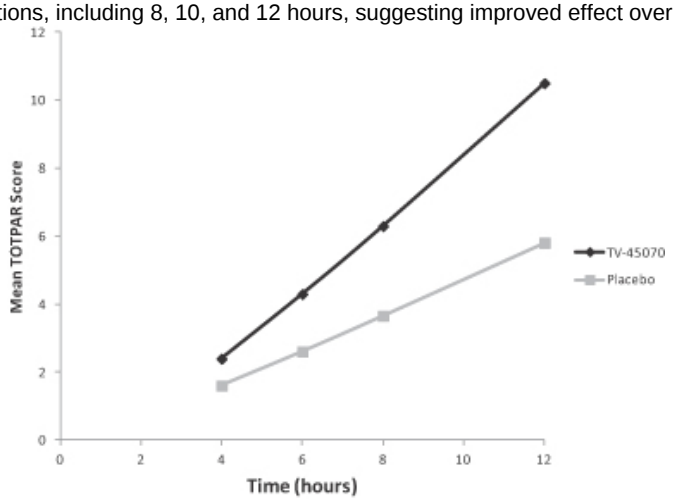
- Safe and well tolerated
- The most frequently reported adverse events, or AEs, were nausea, dizziness, headache and drowsiness, which were mild or moderate in intensity
- No SAEs

KEY EFFICACY DATA

- The primary and secondary endpoints showed consistent trends in favor of reduced pain for TV-45070 versus placebo
- The primary endpoint of TOTPAR-6 showed a separation between active and placebo but did not reach the pre-defined statistical significance for the trial
- Certain secondary endpoints achieved statistical significance
- In a post-hoc analysis, a significantly increased proportion of TV-45070-treated patients reported 30% or greater and 50% or greater reduction in their pain compared to placebo

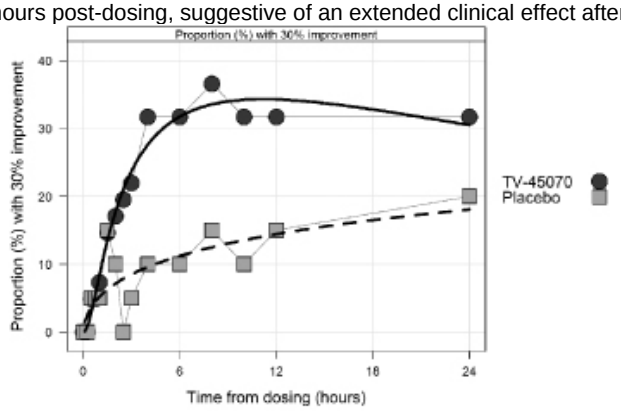
The primary and all secondary endpoints showed consistent trends in favor of reduced pain for TV-45070 versus placebo.

The primary efficacy endpoint was the change in total pain relief at six hours post-dose, or TOTPAR-6. For this endpoint, TV-45070-treated subjects experienced greater pain relief compared to subjects who received placebo (p=0.171), although the difference did not achieve the pre-defined statistical significance for the trial of p=0.1. The figure below illustrates the greater pain relief of TV-45070 versus placebo and a greater separation between TV-45070 and placebo at subsequent observations, including 8, 10, and 12 hours, suggesting improved effect over time.



Multiple secondary endpoints were studied including Categorical Pain Relief Rating Scale, or REL, a numerical five-point scale ranging from no pain to complete pain and Pain Intensity Difference, or PID, compared to baseline. Certain secondary endpoints for the REL achieved predefined statistical significance for this trial.

An exploratory analysis not described within the study protocol submitted to the FDA demonstrated a statistically significant proportion of subjects on TV-45070 exhibited a 30% or greater (p<0.05) (see figure below) and 50% or greater (p<0.05) reduction in pain compared to placebo. These improvements were observed from approximately 1.5 to 19 hours post-dosing, suggestive of an extended clinical effect after a single oral dose.



The data from this proof-of-concept trial support future development of TV-45070 for nociceptive pain indications, including OA.

TV-45070 in Neuropathic EM Pain

TV-45070 has been studied in both a topical formulation and an oral formulation in small, exploratory Phase 2 proof-of-concept clinical trials in primary EM. The table below summarizes the results of these TV-45070 trials:

Oral Phase 2 EM Trial

DESIGN	KEY SAFETY DATA	KEY EFFICACY DATA
n Double-blind, randomized, placebo-controlled crossover n Four primary EM patients randomized n 400 mg or placebo was dosed twice daily for two days	n Most common AEs were dizziness and drowsiness that ranged from mild (no interference in daily activities) to severe (significant interference in daily activities) n No SAEs or deaths, with the most frequently reported AEs being dizziness, headache, sedation and drowsiness	n A significant (42%) reduction in EM pain was observed in the three patients where pain was induced (p=0.014)

Topical Phase 2 EM Trial

DESIGN	KEY SAFETY DATA	KEY EFFICACY DATA
n Double-blind, randomized, placebo-controlled n Eight primary EM patients randomized n 8% ointment or placebo was dosed twice daily for two or three weeks	n Safe and well tolerated n Low plasma exposures n No meaningful central nervous system side effects n No drug-related SAEs, or deaths, with local application site reactions being the most common drug-related AE reported	n Three of seven patients (43%) on TV-45070 showed consistent clinically meaningful reductions in induced and daily pain compared to baseline n Four of six (67%) patients on TV-45070 who used rescue cooling showed a reduction in cooling usage compared to baseline n Six of seven (86%) patients on TV-45070 had an improvement in sleep interference scores compared to baseline

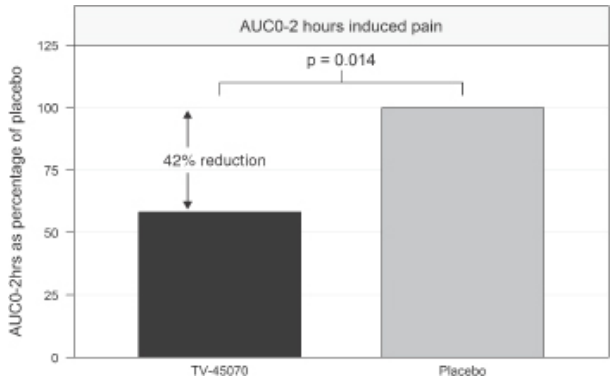
Oral TV-45070 Phase 2 Trial in EM

We conducted a small Phase 2 proof-of-concept trial with oral TV-45070 in patients with primary EM. This exploratory trial, which was published in the journal *Pain*, Goldberg, Y.P. et al *Pain* 153 (2012) 80-85, was a randomized, double-blind, placebo-controlled, two-period crossover design with four subjects comparing oral TV-45070 to placebo each administered twice per day for a duration of two days. In one treatment period, subjects received TV-45070 (400 mg bid), and in the other treatment period, subjects received placebo. The order in which the subjects received each treatment was randomized.

We developed a novel pain induction method for assessing the response of TV-45070 using an electric heater placed at a standardized distance from the subject's feet. Three patients with episodic EM pain were subjected to heat or exercise on up to six occasions during each treatment period to induce a controlled painful flare. One patient who was in constant, severe pain was not induced. Mean total pain intensity scores were measured for the two hours following each pain induction over the two day treatment period with either TV-45070 or placebo. The amount of pain following induction was calculated by quantifying the area under the pain intensity curve for two hours following induction, or AUC0-2hrs.

Improvements in pain efficacy measures in all four subjects were observed, with statistically significant reductions in pain scores in the three subjects in whom pain was induced. The amount of pain in the two hours following induction was reduced by 21% ($p = 0.011$), 33% ($p = 0.004$) and 88% ($p = 0.031$) in these three patients, respectively. Overall, in these three subjects, pain was reduced by 42% on TV-45070, compared to placebo ($p = 0.014$). The subject who was in constant pain and was not induced, showed a mild reduction in pain at various time points during the TV-45070 dosing period.

In the following figure, these data are presented as a mean AUC0-2hrs for the three subjects as a percentage of placebo who underwent pain induction either by step exercise or by heat. A 42% reduction in the amount of induced pain was observed on average with TV-45070 compared to placebo (p=0.014). These data support our belief in the ability of TV-45070 to inhibit human Nav1.7 mediated pain signaling which supports the predicted mechanism of action.



Topical TV-45070 Phase 2 Trial in EM

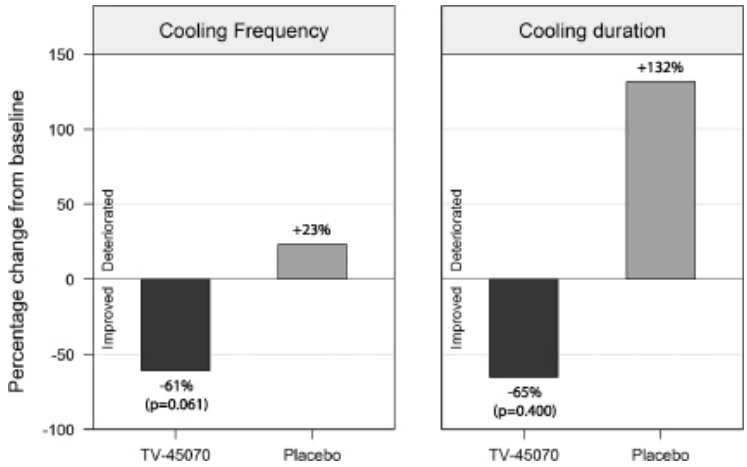
We conducted a small Phase 2 proof-of-concept trial with TV-45070 ointment in patients with primary EM. This exploratory trial was a randomized, double-blind, placebo-controlled design with eight subjects (seven TV-45070 and one placebo) comparing 8% TV-45070 to placebo applied two times per day to the feet for a duration of 14 or 21 days. We evaluated multiple endpoints for each subject to increase our understanding of the effect of TV-45070, including the amount of pain in response to a heat stimulus, the frequency and duration of cooling to provide relief from their painful flares, changes in daily pain scores and the degree of sleep interference. Throughout the trial, TV-45070 plasma concentrations were low and TV-45070 was well-tolerated. Consistent with these low plasma levels, there was no treatment-related dizziness and drowsiness and there were no treatment-related SAEs. Dizziness and drowsiness are common side effects for many currently prescribed centrally-acting analgesics. Local application site reactions were the most common drug-related AEs observed.

In this trial, three of the seven (43%) TV-45070-treated subjects responded positively based on the magnitude and consistency of improvement across the measured efficacy parameters. While the four remaining TV-45070-treated subjects were considered to be non-responders based on their magnitude of response or inconsistent response or both, some improvements were seen in certain efficacy parameters, in particular, sleep and rescue cooling. Similarly, the placebo-treated subject did not show a consistent pattern of response.

Four of the seven (57%) subjects receiving TV-45070 treatment responded to the standard heat inductions compared to pre-treatment. Three of these seven (43%) subjects showed more than 50% improvements in their ability to tolerate and/or recover from the heat inductions. In addition, these three subjects demonstrated clinically meaningful improvements (a one-point, or 30% or greater reduction) in the level of daily pain experienced during the outpatient treatment period compared to pre-treatment. The remaining TV-45070-treated subjects and the placebo-treated subject responded inconsistently or demonstrated deteriorations in their responses compared to baseline.

EM patients may seek relief by immersing their limbs in cold or ice water to help manage their painful flares. If a patient uses less cooling when on TV-45070, this may indicate the product is reducing the number and/or intensity of their EM flares. Four of the six (67%) TV-45070-treated subjects who used cooling at baseline showed a reduction in cooling usage while on treatment. In contrast, the placebo-treated subject cooled for substantially longer during the outpatient period compared to pre-treatment.

Unlike the placebo-treated subject, subjects on TV-45070 used less rescue cooling compared to their baseline measurements. The amount of daily cooling usage, including cooling frequency and cooling duration, for subjects on TV-45070 or placebo as a percentage change from baseline is shown below. This small exploratory trial was not designed to reach statistical significance of p £ 0.05, and no such statistical significance was found.



EM flares often wake patients several times each night and an improvement in the sleep interference scores could indicate that TV-45070 may reduce the number and/or intensity of the flares during sleep. Six of the seven (86%) subjects receiving TV-45070 treatment showed improvements in their daily sleep interference scores during treatment compared to baseline, with three subjects demonstrating at least 50% improvements. In five of the six (83%) subjects this was associated with less or no cooling usage. The placebo-treated subject also demonstrated a reduction in sleep interference; however, as with the daily pain scores, the interpretation of this response is confounded by the greater cooling usage by this subject.

These data support the development of topical TV-45070 as a treatment for the severe pain of EM.

Topical TV-45070 Trial in Postherpetic Neuralgia, or PHN

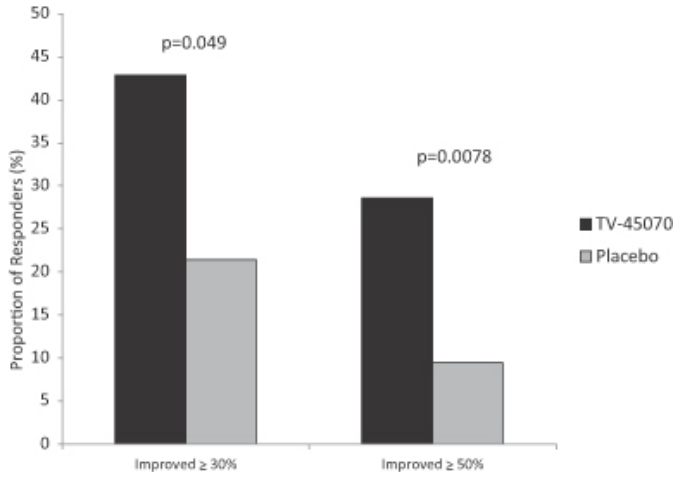
We conducted a Phase 2 proof-of-concept trial of topical TV-45070 in 70 PHN patients. Patients enrolled into the study had refractory PHN and their average disease duration was 76.6 months. This study was a double-blind, placebo-controlled, crossover trial where topical TV-45070 was administered twice daily with each patient receiving either TV-45070 or placebo for three weeks, then after a washout period, the subjects received the alternative treatment.

DESIGN	KEY SAFETY DATA	KEY EFFICACY DATA
• Double-blind, randomized, placebo-controlled, cross-over • 70 subjects randomized • 8% ointment or placebo administered twice daily for three weeks	• Safe and well tolerated • The most frequent AEs (greater than 5% frequency) included local application site reactions, nasopharyngitis and urinary tract infections, or UTIs • Fewer related treatment emergent AEs for TV-45070 (18%) versus placebo (30%) • Low plasma exposure • No meaningful central nervous system side effects • Less application site pain for TV-45070 (16% placebo versus 3% TV-45070) and pruritus, or itch, (13% placebo versus 3% TV-45070) • No drug-related SAEs	• There was a reduction in the primary efficacy endpoint (change from baseline in mean daily pain score) for TV-45070 and placebo, but the difference between treatments was not statistically significant • Significantly increased proportion of TV-45070-treated patients reported 30% or greater (p=0.049) and 50% or greater (p=0.0078) reduction in their pain compared to placebo • A retrospective exploratory analysis not described in the study protocol showed that a significant increased proportion of TV-45070-treated patients reported 30% or greater improvement in sleep (p=0.034) compared to placebo

Topical TV-45070 was well-tolerated with no drug-related SAEs. No drug-related centrally mediated side effects of dizziness and drowsiness were observed in this study. In addition, while on topical TV-45070, PHN patients reported reduced site application pain (3% TV-45070 versus 16% placebo) and less pruritus, or itch, (3% TV-45070 versus 13% placebo) compared to while on placebo treatment. Chronic itch is an important co-morbidity for many PHN patients. The most frequently reported AEs included local application site reactions, nasopharyngitis and UTIs.

There was a reduction in the primary efficacy endpoint (change from baseline in mean daily pain score) for TV-45070 and placebo, but the difference between treatments was not statistically significant. Multiple secondary endpoints were studied, including the proportion of subjects achieving at least 30% and 50% improvements in pain, the use of rescue analgesic medications, and the change in Daily Sleep Interference Scale score. A greater proportion of subjects on TV-45070 experienced a clinically meaningful reduction in their pain during the trial, which is a 30% or greater reduction in pain. A statistically significant larger proportion of subjects on topical TV-45070 exhibited a 30% or greater (p=0.049) and a 50% or greater (p=0.0078) reduction in pain compared to placebo. A greater proportion of subjects on topical TV-45070 exhibited a statistically significant 30% or greater (p=0.034) improvement in sleep compared to placebo. Importantly, a slight trend to reduced use of rescue pain medication in the responders on TV-45070 was observed, suggesting rescue use did not explain the improved efficacy response in these subjects. These data support the development of topical TV-45070 as a treatment for PHN.

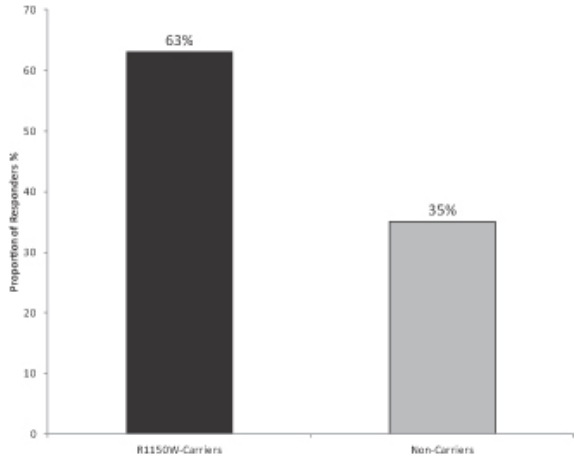
TV-45070 demonstrated a statistically significant increase in the proportion of clinically meaningful responders (30% or greater and 50% or greater reduction in pain) compared to placebo.



There is a relatively common genetic variant of Nav1.7 called the R1150W gene variant. We estimate that this variant has a frequency of 6% to 30% in different ethnic populations. Publications have reported that subjects with this variant who suffer from various painful disorders, including OA, report a greater amount of pain compared to those subjects who do not have this variant. Peripheral nervous system cell-based assays suggest this variant increases the activity of the Nav1.7 channel and the number of resultant nerve signaling action potentials. This increased activity may explain why patients with this variant feel more pain.

We genotyped the PHN trial subjects for R1150W status to explore if the variant could predict a greater likelihood of response to TV-45070 due to its inhibition of NAV1.7. In our PHN trial there were eight carriers of this R1150W variant who were among the evaluable subjects. Of these carriers, five out of eight (63%) had a 30% or greater reduction in their pain when on topical TV-45070. Although it was not a pre-selected endpoint of the trial, a trend towards greater response to TV-45070 was observed in R1150W-carriers versus non-carriers. Due to these observations, stratification of subjects for R1150W in subsequent large Phase 2b trials is planned.

A larger proportion of Nav1.7 R1150W-carriers had a clinically meaningful 30% or greater response to TV-45070 than non-carriers.



Future Development Plans for TV-45070

We are collaborating with Teva on the development of topical TV-45070. Our agreement with Teva requires them to complete three Phase 2 or later stage clinical trials. Using a topical (ointment) formulation of TV-45070, Teva has initiated a 300-patient, randomized Phase 2b clinical trial in OA of the knee, and data are expected in the third quarter of 2015. Teva is also developing topical TV-45070 in neuropathic pain indications, and is currently planning a Phase 2b clinical trial in patients with PHN that is expected to start in the first half of 2015. In addition, we are working with Teva to evaluate the opportunity of developing TV-45070 for the orphan disease EM.

Development of Topical TV-45070 for the Treatment of OA

Based on clinical proof-of-concept data of TV-45070 in the completed clinical trial of third molar tooth extraction, an established pain model of nociceptive pain, Teva has selected to develop topical TV-45070 for the treatment of nociceptive pain in knee OA and recently commenced a randomized Phase 2b study. The rationale supporting the development of TV-45070 in OA includes:

- Clinical proof-of-concept was observed with TV-45070 in the third molar extraction model of nociceptive pain.
- In preclinical models, topical TV-45070 has exhibited an ability to penetrate the knee joint and reside locally at relatively high concentrations while maintaining low plasma concentrations.
- We have identified a CIP patient with Nav1.7 deficiency and painless late stage OA of the knee.
- Published data for the R1150W variant suggests a role of Nav1.7 in OA pain.
- Application of TV-45070 to the human torso in Phase 1 and Phase 2 clinical trials to date showed low systemic exposure of TV-45070, which may in turn reduce systemic adverse events.
- Central nervous system, or CNS, side effects were not observed in the topical PHN trial due to low plasma levels, which we believe is a benefit given evidence that OA patients have shown poor compliance with products that trigger common CNS side effects.
- Injections of lidocaine, a weak blocker of sodium channels, into human knee joints provides short term relief from OA pain providing pharmacological validation that a sodium channel inhibitor can provide relief from OA pain.

Teva filed an IND application with the FDA in November 2013 and, in the first quarter of 2014, commenced a well-powered Phase 2b single knee OA clinical trial. The trial is being conducted at approximately 35 U.S. sites and is a randomized, double-blind, placebo controlled study. Teva plans to enroll 300 patients who will be randomized to receive either placebo, 4% or 8% topical TV-45070. Patients will apply the treatment twice a day to the affected knee for four weeks.

The primary efficacy endpoint is the change from baseline to the last five days of treatment in average evening pain intensity in the treated knee when walking on a flat surface, as measured using the Western Ontario and McMasters Universities Arthritis Index, or WOMAC, scale. Secondary endpoints include the full WOMAC pain subscale, responder rates for 30% and 50% improvement in average evening pain intensity, the percentage of patients who are responders per Outcome Measures in Rheumatoid Arthritis Clinical Trials-Osteoarthritis Research Society International, or OMERACT-OARSI, criteria at week four, other quality of life assessments and various safety and pharmacokinetic analyses.

Exploratory efficacy analyses will also include stratification of the patients based on their R1150W status to evaluate the response to TV-45070 in the presence of this Nav1.7 variant.

We anticipate top line data from this study to be available in the third quarter of 2015 and, if positive, Teva plans to initiate a Phase 3 clinical trial.

About Osteoarthritis Pain

OA is a degenerative disorder that affects joints, most often the knees, hands, hips, spine and feet. It is characterized by the gradual deterioration of the cartilage in the joint often with joint space narrowing. The major symptom of OA is progressive pain, which may lead to stiffness and loss of mobility, as well as swelling around the joints. It has been estimated that approximately 9% of the U.S. population have pain associated with OA, which translates into approximately 28 million patients.

Arthritic pain, including OA, is generally thought to have an inflammatory component and is often treated with anti-inflammatory pain medicines, which work by inhibiting the effects of inflammatory molecules, such as prostaglandins. Acetaminophen and non-selective non-steroidal anti-inflammatory drugs, or NSAIDs, are generally considered the first-line therapy for OA. Non-selective NSAIDs are often replaced by selective NSAIDs that inhibit cyclooxygenase-2, or COX-2, for those individuals at risk of upper gastrointestinal, or GI, adverse reactions including bleeding, ulcers and perforation. If allowed to progress, these GI adverse events can be fatal and NSAID drugs have a FDA black-box warning for these reactions. Although the COX-2 selective inhibitors have a reduced risk of GI adverse reactions, they also have an increased risk of cardiovascular events that can be fatal. This cardiovascular risk led to some COX-2 products being withdrawn from the market and the addition of a black-box warning for such cardiovascular events. Despite limitations, these anti-inflammatory drugs are widely used in OA patients and provide relief from mild to moderate pain. Patients with severe symptomatic OA who fail to respond to these drugs often have joint replacement surgery and may require narcotics or injections of anesthetic agents into the arthritic joint while waiting for such surgery. We believe that the adverse effects associated with narcotics, especially in the elderly, and the difficulty of injections into the joint, combined with the large number of patients with moderate to severe OA, provide a significant market opportunity for a product with a novel mechanism, such as topical TV-45070. We believe that TV-45070 may avoid many of the efficacy limitations and adverse effects observed with acetaminophen, non-selective NSAIDS, COX-2 inhibitors and narcotics.

Development of Topical TV-45070 for the Treatment of Neuropathic Pain Indications

Teva is also developing topical TV-45070 for neuropathic pain disorders, including PHN. Teva is in the process of finalizing plans for a Phase 2b study, which we expect to begin in the first half of 2015. We believe there is a rationale to support the development of TV-45070 in PHN, including:

- We observed efficacy findings in our PHN Phase 2 proof of concept trial.
- We observed improved responder rates for carriers of the R1150W variant in our PHN Phase 2 proof of concept trial.
- Topical TV-45070 has exhibited an ability to penetrate the skin of PHN patients and reside locally, in both the skin and underlying tissue, at relatively high concentrations.
- Application of TV-45070 to the human torso in Phase 1 and Phase 2 clinical trials to date resulted in low systemic exposure of TV-45070, which may reduce systemic adverse events.
- CNS side effects were not observed in the topical PHN trial due to low plasma levels, which we believe is a benefit given evidence that PHN patients have shown poor compliance with products that trigger common CNS side effects.
- Topical TV-45070 in the PHN Phase 2 proof-of-concept trial reduced the incidence of itch compared to placebo.
- Lidocaine, a weak sodium channel blocker, provides relief of PHN pain and is approved and widely used for this indication.

Teva has an IND with the FDA for the development of TV-45070 as a treatment of neuropathic pain. Teva is currently finalizing its plans for a Phase 2b PHN trial that is expected to commence in the first half of 2015.

About Postherpetic Neuralgia

PHN is a painful complication of *Herpes zoster* infection, occurring particularly in patients above the age of 50. *Herpes zoster*, otherwise known as shingles, generally manifests as a painful skin rash with blisters in a limited area on one side of the body. Pain can occur both before and during the rash, and can also persist after the infection has resolved. PHN is defined as pain that persists for 120 days or longer after the onset of rash. It is estimated that the annual incidence of *Herpes zoster* is between 230 and 630 cases per 100,000 people, with PHN occurring in approximately 20% of cases, resulting in approximately 200,000 PHN patients in the U.S.

Like other forms of neuropathic pain, there is a need for improved treatments for PHN. The current leading drugs used to treat PHN suffer from low efficacy for many patients and common dose limiting side effects. It has been reported that 30% to 50% of PHN patients achieve a 30% to 50% improvement in their pain with these agents. Currently prescribed treatments include Pfizer’s Lyrica, and generic forms of gabapentin, both of which target the same mechanism. Common side effects for these drugs include sleepiness, dizziness, blurred vision, edema and weight gain.

Development of Topical TV-45070 as a treatment for Erythromelalgia

We are collaborating with Teva on the feasibility of developing topical TV-45070 for EM. We believe there is rationale to support the development of TV-45070 in EM, including:

- TV-45070 has demonstrated promising clinical data in Phase 2 proof of concept trials for EM pain.
- EM pain is generally localized to the feet and hands, making application of topical TV-45070 a practical method of administration.
- EM pain appears to have a peripheral component.
- Nav1.7, which is the target for TV-45070, is expressed in peripheral nerve endings in the skin and there is genetic data showing overactivity of this target in patients with EM.

No large clinical trial has been performed for the rare orphan disorder of EM and there are no treatments specifically approved for this disorder. Based on our proof-of-concept data in EM for TV-45070 and given the high unmet need in this patient population, we and Teva held an end of Phase 2 meeting with the FDA and a meeting with the EMA in September 2013 and February 2014, respectively, to discuss the clinical development program. We are currently working with Teva to evaluate the opportunity to develop TV-45070 in EM, which may include us being responsible for future EM clinical development.

About Erythromelalgia

EM is a disorder of severe neuropathic pain where, in certain families, mutations causing increased activity of the Nav1.7 sodium channel have been identified. The disorder is characterized by recurrent flares of intense burning pain with redness of the skin in the feet, hands or both. Although there is a range in age of onset and age of diagnosis, the typical diagnosis for EM is between 50 and 60 years. These painful flares are triggered by a variety of factors including heat exposure, exercise and humidity. Most EM patients experience several painful flares a day and for some, these flares may progress into a state of chronic severe burning pain. Many EM patients seek relief by modulating their environment because they do not respond well to existing pharmacotherapies. For example, patients may seek relief by immersing their limbs in cold or ice water, sometimes for many hours a day. Because of complications related to this method of cooling, some EM patients require amputation of their feet. While the condition is variable in nature, normal daily functioning such as walking, standing, working, socializing, exercising and sleeping is generally significantly impaired. For example, in a study of 32 pediatric EM patients published by the Mayo Clinic, 13% of these EM patients were wheelchair bound due to the severity of their EM symptoms.

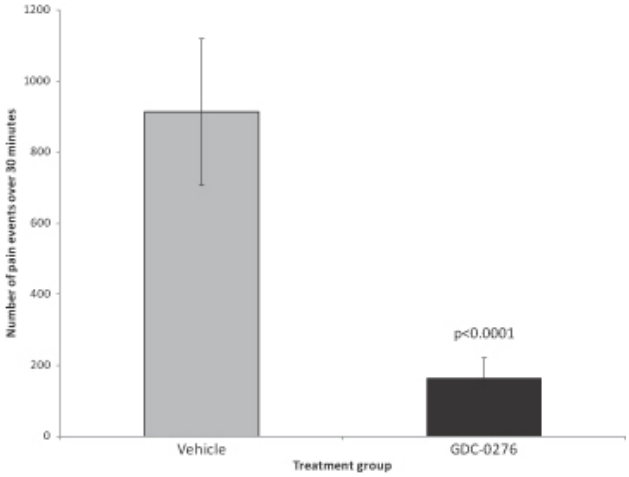
The annual incidence of EM cases has been reported in studies and ranges from 0.36 cases per 100,000 people in Sweden to 1.3 cases per 100,000 people in the U.S. An additional study estimated EM prevalence in Dunedin, New Zealand to be 15 of every 100,000 individuals. With assumed average disease duration of 20 years, these incidence and prevalence data, when extrapolated, would predict approximately 50,000 patients in the U.S. with EM. Of these, we estimate approximately 43,000 may have primary EM, with the remainder having EM that is secondary to another disorder. These estimates of prevalence comprise patients of all ages (from infants to the elderly) and at all stages of disease severity. Furthermore, the prevalence of EM in the U.S. has not to our knowledge been directly determined. In addition, a number of EM patients might not currently be diagnosed or be followed by a specialist physician. Given the above, this prevalence estimate may not represent the number of patients that might be eligible for our clinical trials or that might represent the eligible treatment population for a commercial product.

GDC-0276 and Other Selective Inhibitors of Nav1.7 for the Treatment of Pain

In December 2011, we entered into a collaborative research and license agreement with Genentech and its affiliate, Roche, to discover and develop selective oral inhibitors of Nav1.7 for the treatment of pain. Based on our discovery of Nav1.7 deficiency underlying CIP, we believe that Nav1.7 is a highly-validated target for the treatment of pain. Our Genentech collaboration is focused on discovering and developing selective oral Nav1.7 inhibitors, which is in contrast to our Teva partnership that is focused on developing a topical drug that targets a number of different sodium channels, including Nav1.7.

The first small-molecule, preclinical product candidate that was selected for development under our collaboration is GDC-0276. In September 2014, Genentech initiated a Phase 1 clinical trial for GDC-0276.

To study the effects of targeting Nav1.7 for the treatment of pain, we developed an animal model of inherited EM, or IEM, by expressing human Nav1.7 carrying a known IEM mutation in mice. These mice demonstrate a greater sensitivity to pain. As shown in the figure below, with a single dose of GDC-0276, these mice have fewer pain events demonstrating the ability of GDC-0276 to inhibit Nav1.7 *in vivo*.



Under the terms of the agreement, Genentech paid us an upfront fee of $10.0 million, a $5.0 million milestone payment for the selection of GDC-0276 for development and an $8.0 million milestone payment upon the approval by Health Canada of the CTA for GDC-0276. We are also eligible to receive pre-commercial and commercial milestone payments with respect to the licensed products totaling up to an additional $613.0 million, comprised of up to $45.5 million in preclinical and clinical milestone payments, up to $387.5 million in regulatory milestone payments, and up to $180.0 million in sales-based milestone payments for multiple products and indications. In addition, we are eligible to receive royalties based on net sales of the licensed products, which range from a mid single-digit percentage to ten percent for small-molecule inhibitors for the timeframe that such products are covered by the licensed patents and a low single-digit percentage thereafter, plus a low single-digit percentage for large-molecule inhibitors of Nav1.7.

Chronic pain conditions, such as severe cancer pain and neuropathic pain, are generally recognized as unmet medical needs providing potential commercial opportunities for a new oral pain drug. Currently available pain drugs often have either a lack of meaningful pain relief or dose limiting side effects for many patients. An orally administered selective Nav1.7 inhibitor could present a novel mechanism for the treatment of moderate to severe pain as a single agent or in combination with existing analgesics that work through different mechanisms. This mechanism contrasts with our non-selective sodium channel inhibition approach taken with TV-45070. We believe that the selective inhibition of Nav1.7 may lower the potential for dose-limiting central nervous system side-effects and allow for an improved side-effect profile for oral administration of such an inhibitor, which could potentially allow for the treatment of pain that has a central or deep tissue component, including cancer pain and neuropathic pain.

Product Candidates in Discovery

Selective Small-Molecule Sodium Channel Inhibitors for the Treatment of Dravet Syndrome

We are developing selective inhibitors of the voltage-gated sodium channel Nav1.6 as a treatment for the orphan disease DS. We have developed considerable expertise in voltage-gated sodium channel biology and have accumulated significant experience in the development of selective sodium channel inhibitors. We are leveraging this expertise and chemistry know-how for the development of selective inhibitors of Nav1.6. for the treatment of DS.

DS is a severe form of childhood epilepsy that typically causes mental retardation and, in approximately 10% of cases, premature death before the age of 12 years. The frequency of DS in the U.S. has been estimated to be one in 20,000 to 40,000 births, which, when applied to U.S. federal census data, correlates to approximately 7,500 to 15,000 patients with DS in the U.S.

With our collaborators from McGill University, we identified the genetic link between rare human epilepsy and mutations in the Nav1.1 gene. It is now estimated that approximately 80% of DS cases are believed to be due to mutations in one copy of the Nav1.1 voltage-gated sodium channel that cause a partial loss of Nav1.1 function. Nav1.1 plays a critical role in the normal functioning of inhibitory pathways in the brain. The lack of fully functioning Nav1.1 and inhibitory pathways allows the brain excitatory pathways to be unopposed resulting in the severe seizures of DS. The brain excitatory pathways are preferentially mediated by the voltage-gated sodium channel Nav1.6 and therefore if we are able to selectively inhibit Nav1.6 with a small-molecule compound, we expect to taper this neuronal excitation and thereby treat DS. To further support inhibiting Nav1.6 as a potential therapeutic approach to treat DS, published data has shown that seizures and premature death observed in a DS mouse model can be corrected when these animals are bred with a Nav1.6 knockout mouse.

DS is one of the most resistant epilepsies to treatment. Some benefit has been reported for drugs that increase the activity of the inhibitory brain pathways such as benzodiazepines and Stiripentol, while non-selective sodium channel blockers such as lamotrigine are contraindicated as they may worsen seizures due to further inhibition of Nav1.1. Other intractable childhood seizures that have been associated with genetically-linked partial loss of function of Nav1.1 or gain of function of Nav 1.6 may benefit from a selective inhibitor of Nav1.6 include intractable childhood epilepsy with generalized tonic-clonic seizures and sporadic infantile epileptic encephalopathy.

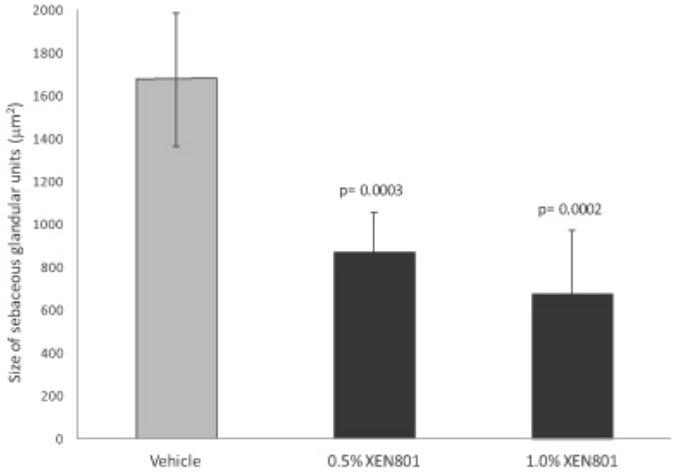
Based on our experience and know-how in developing selective ion channel inhibitors, we have identified potent, selective Nav1.6 inhibitors. We expect to have preclinical proof-of-concept data in the second half of 2014 in animal models of DS. We anticipate filing an IND for a drug candidate to treat DS in 2016. Given the orphan nature of this disorder, we believe that DS may represent an attractive opportunity for us to advance independently.

XEN801 for the Treatment of Acne

XEN801 is a selective, small molecule inhibitor of SCD1 being developed for the treatment of moderate to severe acne. SCD1 is an enzyme involved in lipid synthesis that is expressed in sebaceous glands in the skin. Mice deficient in SCD1 have a marked phenotype of sebaceous gland atrophy suggesting that inhibition of SCD1 activity in the skin may provide a novel treatment option for disorders of enlarged or overactive sebaceous glands, including acne. Published literature studying animals deficient in skin SCD1 have shown that these animals have lower levels of certain lipids produced by sebaceous glands, increased levels of retinoic acid, and increased levels of retinoic acid induced proteins including greatly elevated expression of Lipocalin-2, or LCN2, a gene which transcribes neutrophil gelatinase-associated lipocalin, or NGAL. NGAL has been shown to mediate sebaceous gland cell death and may also have antibacterial properties. LCN2 is also highly upregulated and NGAL levels increased in a human sebaceous gland cell line treated with a SCD1 inhibitor. Published reports on isotretinoin, an approved acne treatment, also support the theory that isotretinoin’s therapeutic effects are achieved in part through increasing levels of NGAL.

We have discovered and developed novel small-molecule SCD1 inhibitors to which we have sole rights. In multiple animal models, we have shown that our SCD1 inhibitors can reduce the size and number of sebaceous glands. XEN801 has demonstrated good properties for topical administration including formulation in a light gel and adequate skin penetration in multiple animal species.

In preclinical mouse models, XEN801 applied topically showed reduction in the size of sebaceous glands in the underlying skin in a time and dose dependent manner.



In these preclinical mouse efficacy studies, at the vehicle treated sites, numerous normally sized lipid loaded sebaceous glands are visible whereas only very small sebaceous glands with hardly any visible lipids are present at the XEN801 treated sites. These reductions are visible after two days of twice-daily treatment and reached statistical significance after seven days (data presented in the above figure), reverting to normal levels once the treatment is stopped. Skin areas distant from the XEN801 treated sites exhibit no changes in sebaceous glands which is consistent with the observed low plasma concentrations of XEN801 and the high local concentrations found in the skin at the treated sites.

We believe these properties support the local treatment of acne and other dermatological disorders with topical XEN801 by decreasing the size of the sebaceous glands, while leaving the skin in other areas unaffected and not exposed unnecessarily to high drug concentrations.

We anticipate selecting a development candidate for IND-enabling studies in the second half of 2014, filing an IND to initiate a Phase 1 trial in the first half of 2015 and initiating a proof-of-concept Phase 2 trial in the second half of 2015. We believe a selective, small-molecule inhibitor of SCD1 has therapeutic potential for skin disorders such as moderate to severe acne seborrhoea and sebaceous hyperplasia.

About Acne

Acne is a multifactorial disease of the pilosebaceous unit, which are skin structures consisting of a hair follicle and its associated sebaceous gland. Increased levels of androgens, such as testosterone, which occurs during puberty cause an enlargement of the sebaceous gland that increases the amount of sebum, a naturally occurring oil, production. Acne develops as a result of blockages in the hair follicles due to the sebaceous glands becoming clogged with excess sebum and dead skin cells. Under these conditions, the bacteria *proprionibacterium acnes* can multiply and cause the noticeable inflammatory lesions. We believe that topically applied SCD1 inhibitors will treat acne at its root cause by reducing the underlying sebaceous gland enlargement and reducing sebum production.

With its association with the onset of puberty, acne prevalence peaks in late adolescence and is estimated to affect 40 to 50 million people in the U.S, of which there are approximately 11 million and 1.2 million individuals with moderate and severe acne, respectively.

Milder forms of acne are normally treated with over the counter products such as those containing benzoyl peroxide whereas moderate and severe forms of acne are often treated with the prescription drug isotretinoin. Isotretinoin is effective with the majority of patients reporting an improvement and approximately 50% of patients reporting remission of their acne. Scientific studies have shown that isotretinoin can cause apoptosis, a form of cell death, in sebaceous glands thereby reducing sebum production.

Isotretinoin treatment has been associated with relatively common side effects including thin and dry skin, hair loss, severe acne flares, blood lipid and liver enzyme elevations. However, the most significant adverse event of isotretinoin is birth defects if taken by women during pregnancy or even a short time before conception due to its teratogenic potential. In 2005, the FDA approved a risk management plan for isotretinoin called iPLEDGE. Under this program, general practitioners are prohibited to prescribe isotretinoin and patients are referred to dermatologists registered and activated in the iPLEDGE program. In addition, patients are also required to register and qualify for the iPLEDGE program. Isotretinoin can only be dispensed for a 30-day supply (no refills) by a registered pharmacy.

We believe that a safer alternative drug (without an onerous risk mitigation plan) that potently reduces sebum production may be a significant treatment option for moderate to severe acne.

Selective Small-Molecule Inhibitors of Targets for the Treatment of Cardiovascular Disease

We entered into a collaborative research and option agreement with Merck in June 2009 to discover novel targets and compounds for the treatment of cardiovascular disease using our Extreme Genetics discovery platform. In 2012, Merck exercised its option to obtain an exclusive license to a target for cardiovascular disease and compound inhibitors that were discovered during the research collaboration. The target, when inhibited, is predicted to provide a beneficial lipid profile with the goal of protecting from cardiovascular disease.

New Pipeline Opportunities

Given the commercial opportunity and the pharmaceutical industry's interest in the pain market, we are using our Extreme Genetics discovery platform and specialized insights into the biology of pain to identify new drug targets for this common medical problem. We formed a second collaboration with Genentech in March 2014 for pain genetics, where we intend to focus on rare phenotypes where individuals have an inability to perceive pain or where individuals have non-precipitated spontaneous severe pain. We believe these phenotypes may unlock new key molecular regulators of pain signaling in humans, which we will seek to validate as targets for new pain drugs. For example, we are analyzing CIP families that are not explained by Nav1.7 deficiency as well as families with severe pain phenotypes such as PEPD, inherited EM and cluster headache.

In addition to our study of rare human disorders of extreme pain or the absence of pain, we are also studying other rare disorders with extreme phenotypes that we believe could yield new drug targets in disorders where high medical need exists, such as neurological disorders like essential tremor. Given our expertise in ion channel drug discovery, we are also focusing our discovery efforts on the identification of ion channel targets where we believe novel selective inhibitors might represent significant therapeutic advances with a focus on orphan indications.

Strategic Alliances

Agreement with uniQure for Glybera

Effective August 2000, we entered into a sublicense and research agreement with uniQure (formerly Amsterdam Molecular Therapeutics); pursuant to which we granted to uniQure an exclusive, worldwide sublicense under certain intellectual property controlled by us to develop and commercialize technology and compounds related to the variant of LPL, called LPL^{S447X}. Together with collaborators from UBC, we demonstrated that the LPL^{S447X} variant resulted in increased LPL enzyme activity leading to reduced triglyceride levels in humans. Under our sublicense and research agreement with uniQure, we collaborated with uniQure and UBC on preclinical activities, and thereafter uniQure developed an LPL gene therapy product, Glybera, which contains the LPL^{S447X} variant. Glybera was approved in the EU in October 2012 to treat LPLD in patients with severe or multiple pancreatic attacks despite dietary fat restrictions. uniQure conducted the clinical trials and is responsible for the commercialization of Glybera.

Under the terms of the agreement, we are eligible to receive mid single-digit royalties on net sales of the licensed products, for sales made by uniQure and its affiliates. The royalty rates for sales made by uniQure and its affiliates are reduced to a low single-digit in countries where the licensed technology and products are not covered by a valid patent claim. Such royalties are payable until the expiration of the last licensed patent from UBC. In July 2013, uniQure announced that it had entered into a partnership with Chiesi for the commercialization of Glybera in the EU and more than a dozen other countries including Brazil, China, Mexico and Russia. We believe that Chiesi plans to launch Glybera in the fourth quarter of 2014 or the first quarter of 2015 in the EU and that uniQure is pursuing a U.S. product approval strategy with plans to file a BLA with the FDA following receipt of the results from a planned Phase 4 trial expected to begin in mid-2015. With respect to uniQure's sublicense to Chiesi for the commercialization of Glybera in the EU and more than a dozen other countries including Brazil, China, Mexico and

Russia, we are eligible to receive a percentage in the low twenties of all non-royalty compensation relating to the licensed technology or products that uniQure receives from Chiesi (including, for example, upfront payments and milestone payments), a percentage in the low twenties of any royalties that uniQure receives from Chiesi based on sales of technology or products covered by the licensed patents, plus a mid single-digit percentage of certain further royalties that uniQure receives from Chiesi based on sales of our licensed technology or products after the expiration of all licensed patents covering the licensed technology or products during the period expiring ten years after the date of the first sale by or on behalf of Chiesi. If uniQure grants a sublicense to a third party other than to Chiesi, then we are eligible to receive a percentage in the low twenties of all non-royalty compensation relating to the licensed technology or products that uniQure receives from such sublicensee (for example upfront payments and milestone payments), plus a percentage in the low twenties of any royalties that uniQure receives from such sublicensee based on sales of technology or products covered by the licensed patents.

We are eligible to receive certain additional milestone payments of less than CAD$1.0 million for Glybera and for each subsequent product, if any, developed pursuant to the agreement with uniQure. We, in turn, have certain payment obligations to our licensor, UBC, based on amounts received from uniQure or otherwise based on the exploitation of the licensed intellectual property.

Our sublicense agreement with uniQure expires on the date of the expiration of the UBC license agreement. Either party may terminate the agreement in the event of the other party's default under the agreement that remains uncured for 20 days after receipt of notice from the non-breaching party.

Agreement with UBC

Effective August 2000, we entered into a license agreement with UBC pursuant to which UBC granted to us an exclusive, worldwide license under UBC's interest in certain intellectual property controlled by UBC to develop and commercialize technology and compounds in the field of gene therapy, including products that related to the variant of LPL, called LPL^{S447X}.

Under the terms of the agreement, UBC is eligible to receive certain pre-commercial milestone payments. UBC is also eligible to receive a mid single-digit percentage of certain compensation that we receive based on sublicenses granted by us to a third party relating to the licensed technology or products, including in connection with our sublicensing agreement with uniQure for LPL^{S447X}.

Through June 30, 2014, we have paid to UBC upfront fees and milestone payments totaling CAD$230,000 and are obligated to pay a certain additional milestone payment of approximately CAD$200,000 for Glybera and further milestone payments of CAD$322,500 for each subsequent product, if any, developed pursuant to our sublicensing agreement with uniQure.

Our license agreement with UBC expires on the date of the expiration of the last patent granted under such license. In the event that our sublicense with uniQure is terminated, we may terminate the agreement with 30 days advance notice to UBC. Either party may terminate the agreement in the event of the other party's default under the agreement that remains uncured for 30 days after receipt of notice from the non-breaching party, and UBC may terminate without such cure period in the event of certain types of breach by us.

Agreement with Teva for TV-45070

In December 2012, we entered into a collaborative development and license agreement with Teva, through its subsidiary, Ivax, pursuant to which we granted Teva an exclusive worldwide license to develop and commercialize certain products, including TV-45070.

Under the terms of the agreement, Teva paid us an upfront fee of $41.0 million. We are collaborating with Teva to further develop TV-45070, and Teva is funding all development costs with respect to the licensed products. Teva is providing funding to us for certain of our full-time equivalents, or FTEs, performing the research collaboration plan. In addition, we are eligible to receive potential milestone payments totaling up to $335.0 million, comprised of a $20.0 million clinical milestone payment, up to $285.0 million in regulatory milestone payments, and a $30.0 million sales-based milestone payment. If TV-45070 is approved, we are also eligible to receive royalties in the low teens to the low twenties on net sales of the licensed products for the timeframe ending upon the latest of (a) expiration of the last valid claim of a licensed patent covering the product, (b) the date on which such product loses market exclusivity and (c) the 10th anniversary of first commercial sale, in each case on a country-by-country basis.

We have an option to a 20% to 30% co-promotion interest for products incorporating TV-45070 in the U.S. Our exercise of this option is subject to meeting objective financial conditions, staffing requirements and compliance standards to be determined in Teva's reasonable discretion in accordance with standard industry practice. Our co-promotion option is exercisable upon the filing of the first new drug application, or NDA, for a TV-45070 product with the FDA and we will be obligated to pay an opt-in fee to Teva, which is calculated by multiplying our co-promotion interest (as a percentage) by the amount of certain milestones paid or payable by Teva, to which is added certain past and future development costs incurred by Teva with respect to the product for the U.S. Our co-promotion interest is in the 20% to 30% range, and equals our percentage share of detailing activities and co-promotion expenses. Such opt-in fee is payable as a reduction to the milestone payments or our share of operating profits that Teva would otherwise owe to us or a combination of the two. If we exercise this option, upon paying an opt-in fee to Teva, we will be eligible to receive, in lieu of royalties with respect to such product sales in the U.S., a percentage share (equal to our co-promotion interest) of operating profits from such product sales in the U.S.

Our agreement with Teva expires on the date of the expiration of all payment obligations to us under the agreement. Teva may terminate the agreement with 60 days advanced written notice to us after at least three Phase 2 (or later stage) clinical trials have been completed or in the event that safety or efficacy issues arise in the development of the licensed products. Either party may terminate the agreement in the event of the other party's material breach which remains uncured for 90 business days. In certain termination circumstances, we would receive licenses to Teva intellectual property relating to TV-45070 clinical development and regulatory filings. If patents within such Teva intellectual property cover the TV-45070 product, then Teva is eligible to receive royalties from us based on a percentage of net product sales, within the mid single-digit range.

Pursuant to the terms of our agreement, we have the right to require Teva or an affiliate of Teva, upon written notice, to purchase common shares issued in this offering if they have commenced a Phase 2b clinical trial of any licensed product under the agreement and if certain minimum price per common share and gross proceed thresholds are met in connection with this offering or the offering is otherwise approved by our shareholders. The number of common shares Teva or its affiliate would be required to purchase in the offering upon receipt of such notice would equal the lesser of:

- $20.0 million divided by the initial public offering price of our common shares in this offering, if this offering occurs on or after the date Teva commences a Phase 3 trial of any licensed product;
- $10.0 million divided by the initial public offering price of our common shares in this offering, if this offering occurs prior to the date Teva commences a Phase 3 trial of any licensed product;
- 19% of our issued and outstanding shares after giving effect to the common shares issued in this offering; and
- a number of common shares that we specify in a notice to Teva.

We plan to exercise our option and require Teva or its affiliate to purchase common shares in this offering pursuant to the terms of our agreement.

Agreements with Genentech for GDC-0276 and Selective Inhibitors of Nav1.7 and Pain Genetics

In December 2011, we entered into a collaborative research and license agreement with Genentech and its affiliate, Roche, to discover and develop small and large molecules that selectively inhibit the Nav1.7 sodium channel and companion diagnostics for the potential treatment of pain. Pursuant to this agreement, we granted Genentech a worldwide exclusive license to develop and commercialize compounds directed to Nav1.7 and products incorporating such compounds for all uses. We also granted Genentech a worldwide non-exclusive license to diagnostic products for the purpose of developing or commercializing such compounds.

Under the terms of the agreement, Genentech paid us an upfront fee of $10.0 million, a $5.0 million milestone payment for the selection of GDC-0276 for development and an $8.0 million milestone payment upon the approval by Health Canada of the CTA for GDC-0276. Genentech is providing funding to us for certain of our full-time equivalents, or FTEs, performing the research collaboration plan. In addition, we are eligible to receive pre- commercial and commercial milestone payments with respect to the licensed products totaling up to an additional $613.0 million, comprised of up to $45.5 million in preclinical and clinical milestone payments, up to $387.5 million in regulatory milestone payments, and up to $180.0 million in sales-based milestone payments for multiple products and indications. In addition, we are eligible to receive royalties based on net sales of the licensed products, which range

from a mid single-digit percentage to ten percent for small-molecule inhibitors for the timeframe that such products are covered by the licensed patents and a low single-digit percentage thereafter until the date that is ten years after first commercial sale on a country-by-country basis, plus a low single-digit percentage for large molecule inhibitors of Nav1.7 for a period of ten years from first commercial sale on a country-by-country basis.

Our agreement with Genentech expires on the date of the expiration of all payment obligations to us under the agreement. Genentech may terminate the agreement with three months advance notice anytime on or after the third anniversary of the effective date of the agreement, and each party may terminate the agreement in the event of a material breach by the other party that remains uncured after 90 days. In the event that Genentech terminates the agreement due to our breach, Genentech retains its licenses and its payment obligations to us are reduced. In the event that we terminate the agreement due to Genentech's breach, the rights and licenses granted to Genentech revert back to us, subject to certain rights to make and use certain large-molecule product candidates that are retained by Genentech, and Genentech is obligated to assign certain regulatory approvals and grant certain licenses to us to enable us to develop and commercialize certain terminated products outside of the collaboration.

In March 2014, we entered into an additional agreement with Genentech for pain genetics, where we intend to use our Extreme Genetics discovery platform to focus on identifying genetic targets associated with rare phenotypes where individuals have an inability to perceive pain or where individuals have non-precipitated spontaneous severe pain. Pursuant to the terms of this agreement, any intellectual property arising out of the collaboration will be jointly owned by us and Genentech. We have also granted Genentech a time-limited, exclusive right of first negotiation on a target-by-target basis to form joint drug discovery collaborations. Under the terms of this agreement, Genentech paid us an upfront payment of $1.5 million and we are eligible for an additional $2.0 million in milestone payments. The agreement terminates upon the expiration of Genentech's time-limited, exclusive right of first negotiation which shall be exercisable for two years. Genentech may terminate the agreement with three months advance notice anytime on or after the 12 month anniversary of the effective date of the agreement, and each party may terminate the agreement in the event of a material breach by the other party that remains uncured for 90 days. Furthermore, pursuant to the terms of a common share put agreement, an affiliate of Genentech will invest $5.0 million in a private placement concurrent with this public offering at the same price per share as this public offering.

Agreement with Merck for Cardiovascular Disease

In June 2009, we entered into an exclusive collaborative research and option agreement with Merck, pursuant to which the parties conducted a research program to discover and develop novel small-molecule candidates for the potential treatment of cardiovascular disease. Merck provided payments to us for our FTEs who performed our activities pursuant to the research program conducted under the Merck agreement. The Merck collaborative research program ended in December 2012.

Under the terms of the agreement, Merck had the option to obtain an exclusive license under certain intellectual property controlled by us to develop and commercialize compounds and products directed to targets in the research program, which has now expired. In June 2012, Merck exercised its option and paid us $2.0 million to obtain such a worldwide exclusive license to develop and commercialize compound inhibitors of a target that was identified using our Extreme Genetics discovery platform. Through June 30, 2014, we have received milestone payments and an option fee totaling $9.0 million, and we are eligible for further research, development and regulatory milestone payments of up to $64.0 million, comprised of $21.0 million in preclinical and clinical milestone payments and up to $43.0 million in regulatory milestone payments for products directed to the licensed target, as well as royalties from the mid to high single-digit range in countries where such products are covered by a valid composition or method of use claim of a Xenon or Merck patent or, if not covered by such claims, royalties in the mid single-digit range for ten years after first commercial sale of such products.

We have an option to co-fund the Phase 1 and first Phase 2 clinical trials of product candidates licensed by Merck by paying Merck 50% of such development costs. Such co-funding option is available at the IND-filing stage for the applicable product candidate. If we exercise our co-funding option then the maximum eligible milestone amounts due to us increase to $86.5 million and the royalties increase to the high single-digit to the sub-teen double-digit range.

Our agreement with Merck expires on the date of the expiration of all royalty payment obligations to us under the agreement. Merck has the right to terminate the agreement upon providing certain notices to us. Each party may

terminate the agreement in the event of a material breach by the other party that remains uncured for 90 days after notice of such breach. In the event that Merck terminates the agreement due to our breach, the licenses granted to Merck survive and becomes fully paid up. In the event that we terminate the agreement due to Merck's breach, the licenses granted to Merck terminate.

Intellectual Property

As part of our business strategy, we generally file patent applications disclosing and claiming the drug targets and their novel uses that we identified with the use of our Extreme Genetics discovery platform, novel compositions that modulate such targets, methods of making and using such compositions and various therapeutic formulations of such compositions that cover our product candidates. In some cases, we also file claims on screening assays as well as compositions and methods for use in diagnosing certain diseases. We generally file applications in the U.S., Canada, the EU and other commercially significant foreign jurisdictions. We also rely on trade secrets, internal know-how, technological innovations and agreements with third parties to develop, maintain and protect our competitive position. Our ability to be competitive will depend on the success of this strategy.

As of September 30, 2014, we owned, co-owned or licensed 50 issued or allowed U.S. patents and approximately 20 pending U.S. patent applications, including provisional and non-provisional filings. We also owned, co-owned or licensed an additional 525 pending and granted counterpart applications worldwide, including 129 country-specific validations of 11 European patents.

We have in-licensed from UBC patent applications and patents related to Glybera, and methods of making and using Glybera. These include European Patent No. 1,200,117, Japanese Patent No. 5,095,894, Canadian Patent No. 2,370,081 and pending U.S. Patent Application No. 13/850,203. European Patent No. 1,200,117, Japanese Patent No. 5,095,894 and Canadian Patent No. 2,370,081, are expected to expire in June 2020 (absent any extensions of term); U.S. Patent Application No. 13/850,203, if issued, is expected to expire in 2020 (absent any extensions of term). In addition, U.S. Patent No. 6,814,962, related European Patent No. 763,116, and pending counterpart U.S. Patent Application No. 13/584,203 have composition claims directed to various recombinant viruses containing LPL coding sequences and methods of using such viruses to treat various pathologies, and various other related patents and applications claiming priority to PCT/FR1995/00669 are directed to the preparation of recombinant viruses and uses in gene therapy, all of which are expected to expire between 2014 and 2015 (absent any extensions of term).

As of September 30, 2014, we owned five issued U.S. patents and five pending U.S. patent applications related to TV-45070, and methods of making and using this and certain related compounds. The issued patents are expected to expire between 2026 and 2030 (absent any extensions of term). In addition, we have 36 foreign issued patents (exclusive of European patent national validation) and filed 119 corresponding applications in various foreign jurisdictions relating to TV-45070.

As of September 30, 2014, we, together with Genentech, co-owned two pending U.S. patent applications, one pending PCT international patent application and three corresponding patent applications in Argentina, Taiwan and the Cooperation Council for the Arab States of the Gulf relating to GDC-0276 and methods of making and using this and certain related compounds. Any patents issuing from these applications are expected to expire in 2033 (absent any extensions of term).

We may obtain patents on our novel compositions before we obtain marketing approval for product candidates containing such compositions. Because patents are only valid for a limited period, and the life of a particular patent may begin prior to the commercial sale of the related product, the commercial value of any patent is limited. However, in certain circumstances, we may be able to seek patent term extensions for patents in the U.S. and in a number of European countries, compensating in part for delays in obtaining marketing approval, but we cannot be certain we will obtain such extensions.

Further, the existence of issued patents does not guarantee our right to practice the patented technology or commercialize any product candidate covered by such a patent. Third parties may have or obtain rights to other patents that could be used to prevent or attempt to prevent us from commercializing our product candidates. If these

other parties are successful in obtaining valid and enforceable patents, and establishing our infringement of those patents, we could be prevented from commercializing our product candidates unless we were able to obtain a license under such patents, which may not be available on commercially reasonable terms or at all.

In the conduct of our business, we may infringe patents or other proprietary rights of third parties. If we do infringe such patents or other proprietary rights, we could be prevented from developing or selling products or from using the processes covered by those patents, could be required to pay substantial damages or could be required to obtain a license from the third party to allow us to use their technology, which may not be available on commercially reasonable terms or at all. If we are not able to obtain a required license or develop alternative technologies, we may be unable to develop or commercialize some or all of our products, and our business could be adversely affected.

Much of our scientific capabilities depend upon the knowledge, experience and skills of key scientific and technical personnel. To protect our rights to our proprietary know-how and technology, we require all our employees, consultants and advisors to enter into confidentiality agreements that require disclosure and assignment to us of ideas, developments, discoveries and inventions made by these employees, consultants and advisors in the course of their service to us.

We may be unable to obtain, maintain and protect the intellectual property rights necessary to conduct our business, and we may be subject to claims that we infringe or otherwise violate the intellectual property rights of others, which could materially harm our business. Although we believe our patents and patent applications provide us with a competitive advantage, the patent positions of biotechnology and pharmaceutical companies can be uncertain and involve complex legal and factual questions. We and our collaborators may not be able to develop patentable product candidates or processes or obtain patents from pending patent applications. Even if patent claims are allowed, the claims may not issue, or in the event of issuance, may not be sufficient to protect the technology owned by or licensed to us or to our collaborators. In certain cases where we have licensed rights to our intellectual property to our collaborators, such collaborators have assumed control of the prosecution and maintenance of the intellectual property portfolio related to such licensed rights. If our collaborators fail to adequately prosecute or maintain any portion of our licensed intellectual property, the competitive advantage and value of our intellectual property portfolio may be reduced. For more information, see “Risk Factors—Risks Related to Our Intellectual Property Rights.”

We own a number of trademarks and intend to develop names for our product candidates and as appropriate seek to secure trademark protection for them, including domain name registration, in relevant jurisdictions.

Research and Development

We have committed, and expect to continue to commit, significant resources to developing new product candidates. We have assembled experienced research and development teams at our Burnaby, British Columbia location with scientific, clinical and regulatory personnel. As of September 30, 2014, we had 53 employees primarily engaged in research and development. Of these employees, 23 hold a Ph.D. degree or M.D. (or equivalent) degree. From time to time we engage individuals on a contractual basis for limited time periods. Our research and development expenses for the years ended December 31, 2011, 2012 and 2013 and the six months ended June 30, 2013 and 2014 were $12.3 million, $10.5 million, $12.3 million, $7.0 million and $5.1 million, respectively.

Manufacturing

We currently rely, and expect to continue to rely, on third parties and our collaborators for the manufacture of our product candidates for preclinical and clinical testing, as well as for commercial manufacture if our product candidates receive marketing approval. Accordingly, we have not internally developed any manufacturing facilities or hired related personnel.

To date, we have obtained materials for our product candidates from multiple third-party manufacturers. We believe that all of the materials required for the manufacture of our product candidates can be obtained from more than one source. However, the manufacturing processes for each of our product candidates, which include large and small-molecules, vary and sourcing adequate supplies may be made more difficult depending on the type of product candidate involved. For example, our small-molecule product candidates generally can be manufactured in reliable and reproducible synthetic processes from readily available starting materials. This chemistry generally is amenable to scale-up and does not require unusual equipment in the manufacturing process.

Competition

The biotechnology and pharmaceutical industries are highly competitive and are characterized by rapidly advancing technologies and a strong emphasis on proprietary products. While we believe that our technology, development experience, scientific knowledge and drug discovery approach provide us with certain advantages, we face potential competition in target discovery and product development from many different approaches and sources, including pharmaceutical and biotechnology companies, academic institutions and governmental agencies and public and private research institutions. Any product candidates or products that we or our collaborators successfully develop and commercialize will compete with existing products and new products that may become available in the future.

With respect to target discovery activities, competitors and other third parties, including academic and clinical researchers, may be able to access rare families and identify targets before we do.

Many of the companies against which we are competing or against which we may compete in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early stage companies may also prove to be significant competitors, particularly through collaboration arrangements with large and established companies.

The key competitive factors affecting the success of all of our product candidates, if approved, are likely to be their efficacy, safety, convenience, price, the effectiveness of alternative products, the level of competition and the availability of coverage and adequate reimbursement from government and other third party payors.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products or therapies that are safer, more effective, have fewer or less severe side effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA, European Medicines Agency, or EMA, or other regulatory approval for their products more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected in many cases by insurers or other third party payors seeking to encourage the use of generic products.

Aside from the product marketplace, our competitors also compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites, recruiting patients for clinical trials, and by acquiring technologies complementary to, or necessary for, our programs.

Our products and product candidates may compete with various therapies and drugs, both in the marketplace and currently under development.

Glybera (alipogene tiparvovec) Competition

There are no approved gene therapies currently on the market for LPLD. The current management of LPLD consists of strict adherence to an extremely low-fat diet, but compliance with such a diet is challenging. Lipid-lowering drugs are generally not effective for treating LPLD. We are not aware of any other drugs or therapies currently in development that treat LPLD by using the LPL sequence containing the LPL^{S447X} genetic variant or otherwise.

TV-45070 and GDC-0276 Competition

Drug discovery and development for various pain applications is intensely competitive. There are a large number of approved products for neuropathic pain, inflammatory pain and other pain indications. These approved products include capsaicin, celecoxib, lidocaine, narcotic analgesics and pregabalin. We are also aware of clinical-stage development programs at several pharmaceutical and biotechnology companies that are developing Nav1.7 inhibitors for the treatment of pain, including Bioline Rx Ltd., Convergence Pharmaceuticals Limited, Dainippon Sumitomo Co., Ltd. and Pfizer, Inc. Moreover, we are aware of various other product candidates in development that target other mechanisms of action to treat various pain indications, including calcium channel inhibitors, nerve growth factor inhibitors and P2X purinoceptor 3 inhibitors. We are not aware of any drugs or therapies currently approved specifically for treating primary EM.

Government Regulation

We are developing both small-molecule and large-molecule product candidates. Our small-molecule product candidates are regulated as drugs by the FDA. The gene therapy product, Glybera, will be regulated by the FDA as a biologic. Within the FDA, the Center for Drug Evaluation and Research, or CDER, regulates drugs and the Center for Biologics Evaluation and Research, or CBER, regulates biological products. Drugs and biological products are subject to regulation under the Federal Food, Drug, and Cosmetic Act, or FD&C Act, and other federal, provincial, state, local and foreign statutes and regulations. Biological products are also subject to regulation under the Public Health Service Act, or PHS Act. Both the FD&C Act and the PHS Act, as applicable, and their corresponding regulations govern, among other things, the testing, manufacturing, safety, efficacy, labeling, packaging, storage, record keeping, distribution, import, export, reporting, advertising and other promotional practices involving drugs and biological products. FDA approval must be obtained before clinical testing of drugs or biological products is initiated, and each clinical study protocol for such product candidates is reviewed by the FDA prior to initiation in the U.S. FDA approval also must be obtained before marketing of drugs and biological products in the U.S. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, provincial, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources and we may not be able to obtain the required regulatory approvals.

Federal and state agencies, congressional committees and foreign governments have expressed interest in further regulating biotechnology. In particular, ethical, social and legal concerns about genetic testing, genetic research and gene therapy could result in additional regulations restricting or prohibiting the processes we may use in discovering and developing our products candidates and in manufacturing and marketing Glybera and any other gene therapy products we or our collaborators may develop. More restrictive regulations or claims that our products are unsafe or pose a hazard could prevent us from commercializing any products. New government requirements may be established that could delay or prevent regulatory approval of our product candidates under development. It is impossible to predict whether legislative changes will be enacted, regulations, policies or guidance changed, or interpretations by agencies or courts changed, or what the impact of such changes, if any, may be.

U.S. Drug Development Process

The process required by the FDA before a drug or biological product may be marketed in the U.S. generally involves the following:

- completion of nonclinical laboratory tests and animal studies according to good laboratory practices, or GLPs, and applicable requirements for the humane use of laboratory animals or other applicable regulations;
- submission to the FDA of an application for an IND, which must become effective before human clinical studies may begin;
- performance of adequate and well-controlled human clinical studies according to the FDA's regulations commonly referred to as good clinical practices, or GCPs, and any additional requirements for the protection of human research subjects and their health information, to establish the safety and efficacy of the proposed product for its intended use;
- submission to the FDA of an NDA for drug products or a BLA for biological products for marketing approval that includes substantive evidence of safety, purity, and potency from results of nonclinical testing and clinical studies;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the product is produced to assess compliance with good manufacturing practices, or GMP, to assure that the facilities, methods and controls are adequate to preserve the product's identity, strength, quality and purity;
- potential FDA audit of the nonclinical and clinical study sites that generated the data in support of the NDA or BLA; and
- FDA review and approval of the NDA, or licensure of the BLA.

Before testing any drug or biological product candidate in humans, the product candidate enters the preclinical testing stage. Preclinical tests, also referred to as nonclinical studies, include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the product candidate. The conduct of the preclinical tests must comply with federal regulations and requirements including GLPs.

The clinical study sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, to the FDA as part of the IND. Some preclinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA places the clinical study on a clinical hold within that 30-day time period. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical study can begin. The FDA may also impose clinical holds on a product candidate at any time before or during clinical studies due to safety concerns or non-compliance. If the FDA imposes a clinical hold, studies may not recommence without FDA authorization and then only under terms authorized by the FDA. Accordingly, we cannot be sure that submission of an IND will result in the FDA allowing clinical studies to begin, or that, once begun, issues will not arise that suspend or terminate such studies.

Clinical studies involve the administration of the drug or biological product candidate to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the study sponsor's control. Clinical studies are conducted under protocols detailing, among other things, the objectives of the clinical study, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety, including stopping rules that assure a clinical study will be stopped if certain AEs should occur. Each protocol and any amendments to the protocol must be submitted to the FDA as part of the IND. Clinical studies must be conducted and monitored in accordance with the FDA's regulations comprising the GCP requirements, including the requirement that all research subjects provide informed consent. Further, each clinical study must be reviewed and approved by an independent institutional review board, or IRB, at or servicing each institution at which the clinical study will be conducted. An IRB is charged with protecting the welfare and rights of study participants and considers such items as whether the risks to individuals participating in the clinical studies are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the form and content of the informed consent that must be signed by each clinical study subject or his or her legal representative and must monitor the clinical study until completed.

Human clinical studies are typically conducted in three sequential phases that may overlap or be combined:

- *Phase 1*. The drug or biological product is initially introduced into healthy human subjects and tested for safety. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.
- *Phase 2*. The drug or biological product is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule.
- *Phase 3*. Clinical studies are undertaken to further evaluate dosage, clinical efficacy, potency, and safety in an expanded patient population at geographically dispersed clinical study sites. These clinical studies are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product labeling.

Post-approval clinical studies, sometimes referred to as Phase 4 clinical studies, may be conducted after initial marketing approval. These clinical studies are used to gain additional experience from the treatment of patients in the intended therapeutic indication, particularly for long-term safety follow-up. The FDA recommends that sponsors observe subjects in studies of gene therapy products for potential gene therapy-related delayed AEs for a 15-year period, including a minimum of five years of annual examinations followed by ten years of annual queries, either in person or by questionnaire, of study subjects. During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical study investigators.

Concurrent with clinical studies, companies usually complete additional animal studies and must also develop additional information about the physical characteristics of the drug or biological product as well as finalize a process for manufacturing the product in commercial quantities in accordance with GMP requirements. To help reduce the risk of the introduction of adventitious agents with use of biological products, the PHS Act emphasizes the importance of manufacturing control for products whose attributes cannot be precisely defined. The manufacturing process must be capable of consistently producing quality batches of the product candidate and,

among other things, the sponsor must develop methods for testing the identity, strength, quality, potency and purity of the final drug or biological product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug or biological product candidate does not undergo unacceptable deterioration over its shelf life.

Human gene therapy products are a new category of therapeutics, and studies of gene therapy products are subject to certain regulatory requirements in addition to those set forth above including certain requirements of the National Institutes of Health.

U.S. Review and Approval Processes

After the completion of clinical studies of a drug or biological product, FDA approval of an NDA or a BLA must be obtained before commercial marketing of the drug or biological product, respectively. The NDA or BLA must include results of product development, laboratory and animal studies, human studies, information on the manufacture and composition of the product, proposed labeling and other relevant information. In addition, under the Pediatric Research Equity Act, or PREA, an NDA or a BLA or supplement to an NDA or a BLA must contain data to assess the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any drug or biological product for an indication for which orphan designation has been granted. The testing and approval processes require substantial time and effort and there can be no assurance that the FDA will accept the NDA or BLA for filing and, even if filed, that any approval will be granted on a timely basis, if at all.

Under the Prescription Drug User Fee Act, or PDUFA, as amended, each NDA or BLA must be accompanied by a substantial user fee. PDUFA also imposes an annual product fee for drugs and biologics and an annual establishment fee on facilities used to manufacture prescription drugs or biologics. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on NDAs or BLAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

Within 60 days following submission of the application, the FDA reviews an NDA or BLA submitted to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any marketing application that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the NDA or BLA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review of the NDA or BLA. The FDA reviews the application to determine, among other things, whether the proposed product is safe and potent, or effective, for its intended use, and has an acceptable purity profile, and whether the product is being manufactured in accordance with GMP to assure and preserve the product's identity, safety, strength, quality, potency and purity. The FDA may refer applications for novel products or products that present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions. During the product approval process, the FDA also will determine whether a Risk Evaluation and Mitigation Strategy, or REMS, is necessary to assure the safe use of the product. If the FDA concludes a REMS is needed, the sponsor of the NDA or BLA must submit a proposed REMS; the FDA will not approve the application without a REMS, if required.

Before approving an NDA or a BLA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with GMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA or a BLA, the FDA will typically inspect one or more clinical sites to assure that the clinical studies were conducted in compliance with IND study requirements and GCP requirements. To assure GMP and GCP compliance, an applicant must incur significant expenditure of time, money and effort in the areas of training, record keeping, production, and quality control.

Notwithstanding the submission of relevant data and information, the FDA may ultimately decide that the NDA or BLA does not satisfy its regulatory criteria for approval and deny approval. Data obtained from clinical studies are not always conclusive and the FDA may interpret data differently than we interpret the same data. If the agency decides not to approve the marketing application, the FDA will issue a complete response letter that usually describes all of the specific deficiencies in the application identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical studies. Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the NDA or BLA, addressing all of the deficiencies identified in the letter, or withdraw the application.

If a product receives regulatory approval, the approval may be significantly limited to specific diseases and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product. Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. The FDA may impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a risk management plan, or otherwise limit the scope of any approval. In addition, the FDA may require post- approval clinical studies, sometimes referred to as Phase 4 clinical studies, designed to further assess a product's safety and effectiveness, and testing and surveillance programs to monitor the safety of approved products that have been commercialized.

One of the performance goals agreed to by the FDA under the PDUFA is to complete its review of 90% of standard NDAs and BLAs within ten months from filing and 90% of priority NDAs and BLAs within six months from filing, whereupon a review decision is to be made. The FDA does not always meet its PDUFA goal dates and its review goals are subject to change from time to time. The review process and the PDUFA goal date may be extended by three months if the FDA requests or the application sponsor otherwise provides additional information or clarification regarding information already provided in the submission within the last three months before the PDUFA goal date.

Fast Track Designation

The FDA has various programs, including Fast Track, which are intended to expedite the process for reviewing drugs. Even if a drug qualifies for one or more of these programs, the FDA may later decide that the drug no longer meets the conditions for qualification. Generally, drugs that are eligible for these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs, and those that offer meaningful benefits over existing treatments. For example, Fast Track is a process designed to expedite the FDA's review of drugs that treat serious or life-threatening diseases or conditions and fill unmet medical needs. Under the Fast Track process, drugs that offer major advances in treatment or provide a treatment where no adequate therapy exists, may also receive priority review by the FDA, or review within six months of the filing of an NDA compared to a traditional review time of ten months. Although Fast Track and priority review do not affect the standards for approval of a drug, for Fast Track designated drugs, the FDA will also attempt to facilitate early and frequent meetings with a sponsor of a Fast Track designated drug, to expedite such drug's review and development. Although FDA has granted fast track designations to TV-45070 for EM and to Glybera for LPLD, such designations may not result in a faster development or review time, do not increase the odds of approval, and may be rescinded at any time if these drug candidates do not continue to meet the qualifications for these programs.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biological product intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the U.S., or more than 200,000 individuals in the U.S. and for which there is no reasonable expectation that the cost of developing and making a drug or biological product available in the U.S. for this type of disease or condition will be recovered from sales of the product. Both Glybera and TV-45070 have received orphan drug designation from the FDA. Orphan product designation must be requested before submitting an NDA or BLA. After the FDA grants orphan product designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan product designation does not convey any advantage in or shorten the duration of the regulatory review and approval process.

If a product that has orphan designation subsequently receives the first FDA approval for such drug for the disease or condition for which it has such designation, the product is entitled to orphan product exclusivity, which means that

the FDA may not approve any other applications to market the same drug or biological product for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan exclusivity. Competitors, however, may receive approval of different products for the indication for which the orphan product has exclusivity or obtain approval for the same product but for a different indication for which the orphan product has exclusivity. Orphan product exclusivity also could block the approval of one of our products for seven years if a competitor obtains approval of the same product as defined by the FDA or if our product candidate is determined to be contained within the competitor's product for the same indication or disease. If a drug or biological product designated as an orphan product receives marketing approval for an indication broader than what is designated, it may not be entitled to orphan product exclusivity. Orphan drug status in the EU has similar, but not identical, benefits, including up to ten years of exclusivity.

Post-Approval Requirements

Maintaining substantial compliance with applicable federal, provincial, state, and local statutes and regulations requires the expenditure of substantial time and financial resources. Rigorous and extensive FDA regulation of drug and biological products continues after approval, particularly with respect to GMP. We will rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of any products that we may commercialize. Manufacturers of our products are required to comply with applicable requirements in the GMP regulations, including quality control and quality assurance and maintenance of records and documentation. Other post-approval requirements applicable to drug and biological products, include reporting of GMP deviations that may affect the identity, potency, purity and overall safety of a distributed product, record-keeping requirements, reporting of adverse effects, reporting updated safety and efficacy information, and complying with electronic record and signature requirements. After an NDA or BLA is approved, the product also may be subject to official lot release. As part of the manufacturing process, the manufacturer is required to perform certain tests on each lot of the product before it is released for distribution. If the product is subject to official release by the FDA, the manufacturer submits samples of each lot of product to the FDA together with a release protocol showing a summary of the history of manufacture of the lot and the results of all of the manufacturer's tests performed on the lot. The FDA also may perform certain confirmatory tests on lots of some products before releasing the lots for distribution by the manufacturer. In addition, the FDA conducts laboratory research related to the regulatory standards on the safety, purity, potency, and effectiveness of drug and biological products.

We also must comply with the FDA's advertising and promotion requirements, such as those related to direct-to-consumer advertising, the prohibition on promoting products for uses or in patient populations that are not described in the product's approved labeling (known as "off-label use"), industry-sponsored scientific and educational activities, and promotional activities involving the internet. Discovery of previously unknown problems or the failure to comply with the applicable regulatory requirements may result in restrictions on the marketing of a product or withdrawal of the product from the market as well as possible civil or criminal sanctions. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant or manufacturer to administrative or judicial civil or criminal sanctions and adverse publicity. FDA sanctions could include refusal to approve pending applications, withdrawal of an approval, clinical hold, warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, refusals of government contracts, mandated corrective advertising or communications with doctors, debarment, restitution, disgorgement of profits, or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us.

Drug and biological product manufacturers and other entities involved in the manufacture and distribution of approved drug or biological products are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with GMPs and other laws. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain GMP compliance. Discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved NDA or BLA, including withdrawal of the product from the market. In addition, changes to the manufacturing process or facility generally require prior FDA approval before being implemented and other types of changes to the approved product, such as adding new indications and additional labeling claims, are also subject to further FDA review and approval.

U.S. Patent Term Restoration and Marketing Exclusivity

Depending upon the timing, duration and specifics of the FDA approval of the use of our product candidates, some of our U.S. patents may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of an NDA or BLA plus the time between the submission date of an NDA or BLA and the approval of that application. Only one patent applicable to an approved product is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The U.S. Patent and Trademark Office, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration.

Under the Hatch-Waxman Amendments, a drug product containing a new chemical entity as its active ingredient is entitled to five years of market exclusivity, and a product for which the sponsor is required to generate new clinical data is entitled to three years of market exclusivity. A drug or biological product can also obtain pediatric market exclusivity in the U.S. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued "Written Request" for such a study.

The Biologics Price Competition and Innovation Act of 2009 created an abbreviated approval pathway for biological products shown to be similar to, or interchangeable with, an FDA-licensed reference biological product. Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, can be shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biologic and the reference biologic may be switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. However, complexities associated with the larger, and often more complex, structure of biological products, as well as the process by which such products are manufactured, pose significant hurdles to implementation that are still being worked out by the FDA.

A reference biologic is granted 12 years of exclusivity from the time of first licensure of the reference product. On April 10, 2013, President Obama released his proposed budget for fiscal year 2014 and proposed to cut this 12-year period of exclusivity down to seven years. He also proposed to prohibit additional periods of exclusivity for reference biologics due to minor changes in product formulations, a practice often referred to as "evergreening." The first biologic product submitted under the abbreviated approval pathway that is determined to be interchangeable with the reference product has exclusivity against other biologics submitted under the abbreviated approval pathway for the lesser of (i) one year after the first commercial marketing, (ii) 18 months after approval if there is no legal challenge, (iii) 18 months after the resolution in the applicant's favor of a lawsuit challenging the biologics' patents if an application has been submitted, or (iv) 42 months after the application has been approved if a lawsuit is ongoing within the 42-month period.

Additional Regulation

In addition to the foregoing, provincial, state and federal U.S. and Canadian laws regarding environmental protection and hazardous substances affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws may affect our future operations.

U.S. Foreign Corrupt Practices Act and Canadian Corruption of Foreign Public Officials Act

The U.S. Foreign Corrupt Practices Act and the Canadian Corruption of Foreign Public Officials Act, to which we are subject, prohibit corporations and individuals from engaging in certain activities to obtain or retain business or to influence a person working in an official capacity. It is illegal to pay, offer to pay or authorize the payment of anything of value to any foreign government official, government staff member, political party or political candidate in an attempt to obtain or retain business or to otherwise influence a person working in an official capacity. We can also be held liable for the acts of our third party agents under the Canadian Corruption of Foreign Public Officials Act.

Government Regulation Outside of the U.S.

In addition to regulations in the U.S., we will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical studies and any commercial sales and distribution of our products.

Whether or not we obtain FDA approval for a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical studies or marketing of the product in those countries. Certain countries outside of the U.S. have a similar process that requires the submission of a clinical study application much like the IND prior to the commencement of human clinical studies. In the EU, for example, a clinical trial application, or CTA, must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and the IRB, respectively. Once the CTA is approved in accordance with a country's requirements, clinical study development may proceed.

The requirements and process governing the conduct of clinical studies, product licensing, coverage, pricing and reimbursement vary from country to country. In all cases, the clinical studies are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

To obtain regulatory approval of an investigational drug or biological product under EU regulatory systems, we must submit a marketing authorization application, or MAA. The application used to file the NDA or BLA in the U.S. is similar to that required in the EU, with the exception of, among other things, country-specific document requirements. The EU also provides opportunities for market exclusivity. For example, in the EU, upon receiving marketing authorization, new chemical entities generally receive eight years of data exclusivity and an additional two years of market exclusivity. If granted, data exclusivity prevents regulatory authorities in the EU from referencing the innovator's data to assess a generic application. During the additional two-year period of market exclusivity, a generic marketing authorization can be submitted, and the innovator's data may be referenced, but no generic product can be marketed until the expiration of the market exclusivity. However, there is no guarantee that a product will be considered by the EU's regulatory authorities to be a new chemical entity, and products may not qualify for data exclusivity. Products receiving orphan designation in the EU can receive ten years of market exclusivity, during which time no similar medicinal product for the same indication may be placed on the market. An orphan product can also obtain an additional two years of market exclusivity in the EU for pediatric studies. No extension to any supplementary protection certificate can be granted on the basis of pediatric studies for orphan indications.

The criteria for designating an "orphan medicinal product" in the EU are similar in principle to those in the U.S. Under Article 3 of Regulation (EC) 141/2000, a medicinal product may be designated as orphan if (1) it is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition; (2) either (a) such condition affects no more than five in 10,000 persons in the EU when the application is made, or (b) the product, without the benefits derived from orphan status, would not generate sufficient return in the EU to justify investment; and (3) there exists no satisfactory method of diagnosis, prevention or treatment of such condition authorized for marketing in the EU, or if such a method exists, the product will be of significant benefit to those affected by the condition, as defined in Regulation (EC) 847/2000. Orphan medicinal products are eligible for financial incentives such as reduction of fees or fee waivers and are, upon grant of a marketing authorization, entitled to ten years of market exclusivity for the approved therapeutic indication. The application for orphan drug designation must be submitted before the application for marketing authorization. The applicant will receive a fee reduction for the marketing authorization application if the orphan drug designation has been granted, but not if the designation is still pending at the time the marketing authorization is submitted. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. Glybera has received orphan drug designation for the treatment of LPLD in the EU.

The 10-year market exclusivity may be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan designation, for example, if the product is sufficiently profitable not to justify maintenance of market exclusivity. Additionally, marketing authorization may be granted to a similar product for the same indication at any time if:

- The second applicant can establish that its product, although similar, is safer, more effective or otherwise clinically superior;
- The applicant consents to a second orphan medicinal product application; or
- The applicant cannot supply enough orphan medicinal product.

For other countries outside of the EU, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical studies, product licensing, coverage, pricing and reimbursement vary from country to country. In all cases, again, the clinical studies are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Pharmaceutical Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we obtain regulatory approval. In the U.S. and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the availability of coverage and adequate reimbursement from third-party payors. Third-party payors include government programs such as Medicare or Medicaid, managed care plans, private health insurers, and other organizations. These third-party payors may deny coverage or reimbursement for a product or therapy in whole or in part if they determine that the product or therapy was not medically appropriate or necessary. Third-party payors may attempt to control costs by limiting coverage to specific drug products on an approved list, or formulary, which might not include all of the FDA-approved drug products for a particular indication, and by limiting the amount of reimbursement for particular procedures or drug treatments.

The cost of pharmaceuticals and devices continues to generate substantial governmental and third party payor interest. We expect that the pharmaceutical industry will experience pricing pressures due to the trend toward managed healthcare, the increasing influence of managed care organizations and additional legislative proposals. Third-party payors are increasingly challenging the price and examining the medical necessity and cost-effectiveness of medical products and services, in addition to their safety and efficacy. We may need to conduct expensive pharmacoeconomic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to obtain the FDA approvals. Our product candidates may not be considered medically necessary or cost-effective. A payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

Some third-party payors also require pre-approval of coverage for new or innovative devices or drug therapies before they will reimburse healthcare providers who use such therapies. While we cannot predict whether any proposed cost-containment measures will be adopted or otherwise implemented in the future, these requirements or any announcement or adoption of such proposals could have a material adverse effect on our ability to obtain adequate prices for our product candidates and to operate profitably.

In international markets, reimbursement and healthcare payment systems vary significantly by country, and many countries have instituted price ceilings on specific products and therapies. There can be no assurance that our products will be considered medically reasonable and necessary for a specific indication, that our products will be considered cost-effective by third-party payors, that coverage or an adequate level of reimbursement will be available or that the third-party payors' reimbursement policies will not adversely affect our ability to sell our products profitably.

Healthcare Reform

In the U.S. and foreign jurisdictions, there have been a number of legislative and regulatory changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs.

In the U.S., the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the Medicare Modernization Act, changed the way Medicare covers and pays for pharmaceutical products. The Medicare Modernization Act expanded Medicare coverage for drug purchases by the elderly by establishing Medicare Part D and introduced a new reimbursement methodology based on average sales prices for physician administered drugs under Medicare Part B. In addition, this legislation provided authority for limiting the number of drugs that will be covered in any therapeutic class under the new Medicare Part D program. Cost reduction initiatives and other provisions of this legislation could decrease the coverage and reimbursement rate that we receive for any of our approved products. While the Medicare Modernization Act applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates. Therefore, any reduction in reimbursement that results from the Medicare Modernization Act may result in a similar reduction in payments from private payors.

In March 2010, the President signed into law the Patient Protection and Affordable Care Act, as amended, or PPACA, a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against healthcare fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on pharmaceutical and medical device manufacturers and impose additional health policy reforms. Among other things, PPACA revises the definition of “average manufacturer price” for reporting purposes, which could increase the amount of Medicaid drug rebates to states. Further, the new law imposes a significant annual fee on companies that manufacture or import branded prescription drug products. Substantial new provisions affecting compliance have also been enacted, which may affect our business practices with healthcare practitioners and a significant number of provisions are not yet, or have only recently become, effective. Although it is too early to determine the full effect of PPACA, the new law appears likely to continue the downward pressure on pharmaceutical pricing, especially under the Medicare program, and may also increase our regulatory burdens and operating costs.

In addition, other legislative changes have been proposed and adopted since PPACA was enacted. For example, on August 2, 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, triggering the legislation’s automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, starting in 2013. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, reduced Medicare payments to several providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on our customers and accordingly, our financial operations.

We expect that PPACA, as well as other healthcare reform measures that have been and may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for any approved product, and could seriously harm our future revenue. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products.

In addition, different pricing and reimbursement schemes exist in other countries. In the European Community, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national healthcare systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may be marketed only once a reimbursement price has been agreed upon. Some of these countries may require, as condition of obtaining reimbursement or pricing approval, the completion of clinical trials that compare the cost-effectiveness of a

particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on healthcare costs in general, particularly prescription drugs, has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

Other Healthcare Laws and Compliance Requirements

In the U.S., the research, manufacturing, distribution, sale and promotion of drug products and medical devices are potentially subject to regulation by various federal, provincial, state and local authorities in addition to the FDA, including the Centers for Medicare & Medicaid Services, other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General), the U.S. Department of Justice, state Attorneys General, and other state and local government agencies. For example, sales, marketing and scientific/educational grant programs must comply with fraud and abuse laws such as the federal Anti-Kickback Statute, as amended, the federal False Claims Act, as amended, and similar state laws. Pricing and rebate programs must comply with the Medicaid Drug Rebate Program requirements of the Omnibus Budget Reconciliation Act of 1990, as amended, and the Veterans Health Care Act of 1992, as amended. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. All of these activities are also potentially subject to federal and state consumer protection and unfair competition laws.

The federal Anti-Kickback Statute prohibits any person, including a prescription drug manufacturer (or a party acting on its behalf), from knowingly and willfully soliciting, receiving, offering or providing remuneration, directly or indirectly, to induce or reward either the referral of an individual, or the furnishing, recommending, or arranging for a good or service, for which payment may be made under a federal healthcare program such as the Medicare and Medicaid programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, and formulary managers on the other. The term “remuneration” is not defined in the federal Anti-Kickback Statute and has been broadly interpreted to include anything of value, including for example, gifts, discounts, the furnishing of supplies or equipment, credit arrangements, payments of cash, waivers of payments, ownership interests and providing anything at less than its fair market value. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain business arrangements from prosecution, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exemption or safe harbor. Our practices may not in all cases meet all of the criteria for safe harbor protection from federal Anti-Kickback Statute liability. The reach of the Anti-Kickback Statute was broadened by the recently enacted PPACA, which, among other things, amends the intent requirement of the federal Anti-Kickback Statute such that a person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. In addition, the PPACA provides that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act (discussed below) or the civil monetary penalties statute, which imposes fines against any person who is determined to have presented or caused to be presented claims to a federal healthcare program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. Additionally, many states have adopted laws similar to the federal Anti-Kickback Statute, and some of these state prohibitions apply to referral of patients for healthcare items or services reimbursed by any third-party payor, not only the Medicare and Medicaid programs in at least some cases, and do not contain safe harbors.

The federal False Claims Act imposes liability on any person or entity that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment by a federal healthcare program. The *qui tam* provisions of the False Claims Act allow a private individual to bring civil actions on behalf of the federal government alleging that the defendant has submitted a false claim to the federal government, and to share in any monetary recovery. In recent years, the number of suits brought by private individuals has increased dramatically. In addition, various states have enacted false claims laws analogous to the False Claims Act. Many of these state laws apply where a claim is submitted to any third-party payor and not merely a federal healthcare program. There are many potential bases for liability under the False Claims Act. Liability arises, primarily, when an entity knowingly submits, or causes another to submit, a false claim for reimbursement to the federal government. The False Claims Act has

been used to assert liability on the basis of inadequate care, kickbacks and other improper referrals, improperly reported government pricing metrics such as Best Price or Average Manufacturer Price, improper use of Medicare numbers when detailing the provider of services, improper promotion of off-label uses (i.e., uses not expressly approved by FDA in a drug's label), and allegations as to misrepresentations with respect to the services rendered. Our future activities relating to the reporting of discount and rebate information and other information affecting federal, provincial, state and third party reimbursement of our products, and the sale and marketing of our products and our service arrangements or data purchases, among other activities, may be subject to scrutiny under these laws. We are unable to predict whether we would be subject to actions under the False Claims Act or a similar state law, or the impact of such actions. However, the cost of defending such claims, as well as any sanctions imposed, could adversely affect our financial performance. Also, the Health Insurance Portability and Accountability Act of 1996, or HIPAA, created several new federal crimes, including healthcare fraud, and false statements relating to healthcare matters. The healthcare fraud statute prohibits knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third-party payors. The false statements statute prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.

In addition, we may be subject to, or our marketing activities may be limited by, data privacy and security regulation by both the federal government and the states in which we conduct our business. For example, HIPAA and its implementing regulations established uniform federal standards for certain "covered entities" (healthcare providers, health plans and healthcare clearinghouses) governing the conduct of certain electronic healthcare transactions and protecting the security and privacy of protected health information. The American Recovery and Reinvestment Act of 2009, commonly referred to as the economic stimulus package, included expansion of HIPAA's privacy and security standards called the Health Information Technology for Economic and Clinical Health Act, or HITECH, which became effective on February 17, 2010. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to "business associates"—independent contractors or agents of covered entities that create, receive, maintain, or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorney's fees and costs associated with pursuing federal civil actions.

There are also an increasing number of state "sunshine" laws that require manufacturers to make reports to states on pricing and marketing information. Several states have enacted legislation requiring pharmaceutical companies to, among other things, establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales, marketing, pricing, clinical trials and other activities, and/or register their sales representatives, as well as to prohibit pharmacies and other healthcare entities from providing certain physician prescribing data to pharmaceutical companies for use in sales and marketing, and to prohibit certain other sales and marketing practices. In addition, beginning in 2013, a similar federal requirement began requiring manufacturers to track and report to the federal government certain payments and other transfers of value made to physicians and other healthcare professionals and teaching hospitals and ownership or investment interests held by physicians and their immediate family members. The federal government will disclose the reported information on a publicly available website beginning in 2014. These laws may affect our sales, marketing, and other promotional activities by imposing administrative and compliance burdens on us. If we fail to track and report as required by these laws or otherwise comply with these laws, we could be subject to the penalty provisions of the pertinent state and federal authorities.

Because of the breadth of these laws and the narrowness of available statutory and regulatory exemptions, it is possible that some of our business activities could be subject to challenge under one or more of such laws. If our operations are found to be in violation of any of the federal and state laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including criminal and significant civil monetary penalties, damages, fines, imprisonment, exclusion from participation in government healthcare programs, injunctions, recall or seizure of products, total or partial suspension of production, denial or withdrawal of pre-marketing product approvals, private *qui tam* actions brought by individual whistleblowers in the name of the government or refusal to allow us to enter into supply contracts, including government contracts, and the curtailment

or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. To the extent that any of our products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-approval requirements, including safety surveillance, anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

Legal Proceedings

From time to time, we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not presently a party to any legal proceedings that, in the opinion of our management, would reasonably be expected to have a material adverse effect on our business, financial condition, operating results or cash flows if determined adversely to us. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Facilities

Our headquarters are located in Burnaby, British Columbia, where we occupy approximately 33,600 square feet of office and laboratory space. The term of the lease expires in March 2022. We currently pay an aggregate of approximately $85,621 per month in base rent, property tax, common area maintenance fees and management fees, and the landlord holds a security deposit equal to approximately $80,329. We believe that our existing facilities are adequate to meet our business requirements for the near-term and that additional space will be available on commercially reasonable terms, if required.

Environmental Matters

Our operations require the use of hazardous materials (including biological materials) which subject us to a variety of federal, provincial and local environmental and safety laws and regulations. Some of the regulations under the current regulatory structure provide for strict liability, holding a party potentially liable without regard to fault or negligence. We could be held liable for damages and fines as a result of our, or others', business operations should contamination of the environment or individual exposure to hazardous substances occur. We cannot predict how changes in laws or development of new regulations will affect our business operations or the cost of compliance.

Employees

As of September 30, 2014, we had 74 employees, including 63 full-time employees. Of our employees, 53 were primarily engaged in research and development, and 23 of whom hold a Ph.D. or M.D. (or equivalent) degree. None of our employees is represented by a labor union. We have not experienced any work stoppages, and we consider our relations with our employees to be good.

MANAGEMENT

Executive Officers and Directors

The following table sets forth information regarding our current executive officers and directors, and their ages as of September 30, 2014:

NAME	AGE	POSITION(S)
Executive Officers		
Simon Pimstone, M.B. ChB., Ph.D.	47	President, Chief Executive Officer and Director
Gary Bridger, Ph.D.	51	Executive Vice President of Research and Development
Charles J. Cohen, Ph.D.	66	Vice President, Biology
Karen G. Corraini, J.D.	59	General Counsel and Corporate Secretary
Y. Paul Goldberg, M.B. ChB., Ph.D.	54	Vice President of Clinical Development
Ian Mortimer, MBA, CPA, CMA	38	Chief Financial Officer
Robin Sherrington, Ph.D.	53	Senior Vice President of Business & Corporate Development
Non-Employee Directors		
Michael Tarnow (1)(2)(3).	70	Chair of the Board
Mohammad Azab, MBA, M.B. ChB. (2)(3).	58	Director
Johnston L. Evans (1)	66	Director
Michael Hayden, M.B. ChB., Ph.D.	62	Director
Frank Holler (1)	57	Director
Gary Patou, M.B. B.S., M.D. (2)(3)	55	Director
Evan A. Stein, M.B. ChB., Ph.D.	68	Director

(1) Member of the audit committee.
(2) Member of the compensation committee.
(3) Member of the nominating and corporate governance committee.

Executive Officers

Simon Pimstone, M.B. ChB., Ph.D., FRCPC co-founded our company, has served as our President and Chief Executive Officer since January 2003, and has served on our board of directors since our inception in November 1996. Prior to founding our company, Dr. Pimstone trained as a clinical research fellow with the Department of Medical Genetics at the University of British Columbia from 1994 until 1998, where he was responsible for managing a provincial lipid clinic outreach program providing lipid management to at risk patients in the Province of British Columbia. Dr. Pimstone holds an M.B. ChB. from the University of Cape Town, a FRCPC from the University of British Columbia, and a Ph.D. from the University of Amsterdam in cardiovascular genetics. Dr. Pimstone is a member and former chair of the board of directors of LifeSciences British Columbia, a non-profit industry association that supports the life science community. Dr. Pimstone also serves as director of the private biotechnology companies Enject Therapeutics Inc., Eupraxia Pharmaceuticals Inc. and Cyon Therapeutics Inc. Our board of directors believes that Dr. Pimstone possesses specific attributes that qualify him to serve as a director, including his extensive executive leadership experience, many years of service on our board of directors and as our Chief Executive Officer and extensive knowledge of our company and industry.

Gary Bridger, Ph.D. has served as our Executive Vice President of Research and Development since January 2013. Dr. Bridger serves as a Managing Director at Five Corners Capital, which has been appointed to manage the remaining portfolio of biotechnology and technology investments of Ventures West Capital Management, a venture capital firm. Dr. Bridger also serves on the board of directors at Alder BioPharmaceuticals, Inc., a clinical-stage biopharmaceutical company. Dr. Bridger served as a venture partner for Ventures West from June 2010 until June 2012. From January 2008 to May 2010, Dr. Bridger served as a consultant to various biotechnology companies. Prior to Ventures West Capital Management, Dr. Bridger worked at Genzyme Corporation (subsequently acquired by Sanofi, S.A.), a global pharmaceutical company focused on rare diseases and multiple sclerosis, from November 2006 until December 2007. In this position he assisted with development, regulatory and commercial strategies for

Mozobil. Prior to Genzyme, Dr. Bridger co-founded AnorMED Inc., a biopharmaceutical company, in June 1996 and was its Chief Scientific Officer from 2000 until its acquisition by Genzyme in November 2006. At AnorMED, he was responsible for research, development, and clinical programs. Dr. Bridger currently serves on the Scientific Advisory Board of Alectos Therapeutics Inc., a private company that discovers and develops novel small-molecule therapeutics. Dr. Bridger received his Ph.D. in Organic Chemistry from the University of Manchester Institute of Science and Technology (United Kingdom) and completed a post-doctoral fellowship at Boston College.

Charles J. Cohen, Ph.D. has served as our Vice President, Biology since 2008. Prior to joining us, Dr. Cohen worked at Vertex Pharmaceuticals as a Research Fellow II from 2004 to 2008. In this position he led biology teams targeting neuropathic pain and neuroinflammation. From 1986 to 2004, Dr. Cohen worked at Merck Research Laboratories, or MRL. From 2000 to 2004, he served as Director of Neuroscience and was world-wide coordinator of MRL's research on multiple sclerosis and neuroinflammation. From 1986 to 2000, Dr. Cohen was a member of the Ion Channel department, advancing to the level of Senior Investigator. Prior to MRL, Dr. Cohen served as a Senior Scientist at Bayer Pharmaceuticals. Dr. Cohen received his Ph.D. in Biophysics and Theoretical Biology from the University of Chicago and received post-doctoral training in the Department of Cardiology at the University of Chicago and the Department of Physiology at Yale University.

Karen G. Corraini, *J.D.* has served as our General Counsel and Corporate Secretary since February 2003, and has held various positions since joining us in June 2001. Prior to joining us, Ms. Corraini practiced law at McCarthy Tétrault LLP from January 2000 until June 2001. From 1996 to 1999, Ms. Corraini was Managing Director and Chief Executive Officer of the Canadian Bacterial Diseases Network, an organization focused on the discovery and commercialization of microbiology-related research from a Canada-wide consortium of researchers. Prior to that, Ms. Corraini practiced law at the Canadian law firms of Goldsmith and Harshorne and Ferguson Gifford. Ms. Corraini is a member of the board of the Cystic Fibrosis Technology Initiative and of the British Columbia Chapter of the Association of Corporate Counsel. She also serves as a member of the Research Advisory Council for Cystic Fibrosis Canada. She received her Medical Laboratory Technology Degree from SAIT and Foothills Hospital, and a J.D. from the University of Victoria.

Y. Paul Goldberg, M.B. ChB., Ph.D., FRCPC has served as our Vice President of Clinical Development since February 2010, as our Senior Director, Clinical Biology and Target Discovery from 2002 until February 2010, as our Senior Director, Scientific Programs from 2001 until 2002, and as our Director and Senior Scientist from 2000 until 2002. Since 2000 Dr. Goldberg has also worked at the University of British Columbia in the Department of Medical Genetics as a Medical Geneticist, Clinical Assistant Professor. Dr. Goldberg received his M.B. ChB. and Ph.D. from the University of Cape Town, and he obtained his specialization in clinical genetics, FRCPC from the University of British Columbia.

Ian Mortimer, MBA, CPA, CMA has served as our Chief Financial Officer since October 2013. Prior to joining us, Mr. Mortimer served as Executive Vice President and Chief Financial Officer at Tekmira Pharmaceuticals Corporation, or Tekmira, a NASDAQ-listed biotechnology company focused on the development of RNA interference, or RNAi, therapeutic drugs, from 2007 until October 2013. Mr. Mortimer was responsible for all aspects of Tekmira's finance and capital markets activities and led Tekmira's listing on NASDAQ in 2010. From 2004 to 2007, Mr. Mortimer was Chief Financial Officer at Inex Pharmaceuticals and held various other positions at Inex Pharmaceuticals from 1997 to 2004. Mr. Mortimer has an M.B.A. from Queen's University, a B.Sc. in Microbiology from the University of British Columbia and is a Chartered Professional Accountant, Certified Management Accountant.

Robin Sherrington, Ph.D. has served as our Senior Vice President of Business & Corporate Development since February 2012, as our Vice President of Business & Corporate Development from January 2010 to February 2012, and has held various Senior Director positions in business development and other departments since joining us in March 2001. Prior to joining us, Dr. Sherrington worked at Pfizer, Inc., a global pharmaceutical company, as a neuroscientist from 1999 to 2001. Dr. Sherrington also previously served as Director of Neuroscience, from 1996 to 1999, at the biotechnology companies Axys Pharmaceuticals and Sequana Therapeutics. Prior to 1996 Dr. Sherrington was a post-doctoral fellow at University of Toronto, received his Ph.D. from the University College London, and his B.Sc. with honors from University of Reading.

Non-Employee Directors

Michael Tarnow has served as chair of our board of directors since May 1999. Since 1995, Mr. Tarnow has been an advisor to and member of the boards of directors of private and public healthcare and biotechnology companies in the U.S., Canada and Europe, including Axcan Pharma, Creative Biomolecules, Inc, Caprion Pharmaceuticals Inc. and MediGene AG. He served as Chairman of EntreMed, Inc., or EntreMed, from February 2003 to February 2009, and served as Executive Chairman of EntreMed from February 2009 to January 2012. Mr. Tarnow holds a B.B.A. in Business Administration from Wayne State University and a J.D. from the University of Illinois, College of Law. Our board of directors believes that Mr. Tarnow is qualified to serve on our board of directors because of his senior management experience in the biopharmaceutical industry and his knowledge and perspective on our business.

Mohammad Azab, MBA, M.B. ChB. has served as a member of our board of directors since October 2003. Dr. Azab has been the Chief Medical Officer of Astex Pharmaceuticals, Inc., a pharmaceutical company focused on the discovery and development of drugs in oncology and other areas, since July 2009 and has been President and Chief Medical Officer of Astex since January 2014. Prior to joining Astex, he was with Intradigm Corporation, a developer of RNAi therapeutics acquired by Silence Therapeutics PLC, where he served as President and Chief Executive Officer from July 2006 until November 2008 and as a director from July 2006 until January 2010. Prior to Intradigm Corporation, he served as Executive Vice President, of Research and Development and Chief Medical Officer for QLT Inc., and held several senior positions at AstraZeneca and Sanofi. Dr. Azab holds an M.B.A. from the Richard Ivey School of Business, University of Western Ontario, and an M.B. ChB. from Cairo University. He received post-graduate training and degrees in oncology research from the University of Paris-Sud and biostatistics from the University of Pierre et Marie Curie in Paris, France. Our board of directors believes Dr. Azab is qualified to serve on the board of directors because of his extensive senior management experience in our industry.

Johnston L. Evans has served as a member of our board of directors since March 2008. Mr. Evans has been a General Partner at Invesco Private Capital, Inc., a venture capital firm, and its predecessor since 1995. He served as a member of the board of directors of E2open, Inc., a publicly-traded software solutions provider, from June 2005 to November 2013. Mr. Evans holds a B.A. in Political Science from Boston University. Our board of directors believes that Mr. Evans' qualifications to serve on our board of directors include his extensive experience as a venture capital investor and a director of a public company.

Michael Hayden, M.B. ChB., Ph.D., FRCPC co-founded our company and has served as a member of our board of directors since November 1996. Dr. Hayden previously served as our Chief Scientific Officer from January 1997 to September 2012. Since September 2012, Dr. Hayden has been Chief Scientific Officer and President of Global Research & Development of Teva Pharmaceutical Industries Ltd. Dr. Hayden has also been a professor of Medical Genetics at the University of British Columbia since August 1983 and Director of the Center for Molecular Medicine and Therapeutics since 1992. He is presently the Program Director of the Translational Laboratory in Genetic Medicine in Singapore. He received his Ph.D. and M.B. ChB. from the University of Cape Town and completed his post-doctoral fellowship and training at Harvard Medical School. Our board of directors believes Dr. Hayden is qualified to serve on our board of directors because of his scientific background and his extensive knowledge and perspective on our company.

Frank Holler has served as a member of our board of directors since February 1999 and previously served as our President and Chief Executive Officer from February 1999 until June 2003. Since March 2004, Mr. Holler has been the Chief Executive Officer at BC Advantage Funds (VCC) Ltd., a venture capital firm that invests in emerging life science, cleantech and information technology companies, where he has served as Chairman since January 2010. Mr. Holler also served as President and Chief Executive Officer of ID Biomedical Corporation, a publicly-traded biotechnology company, from 1991 to 1998 and was a founding director of Angiotech Pharmaceuticals, a publicly-traded biotechnology company, from 1992 to 1997. Mr. Holler holds a B.A. in Economics and an M.B.A. from the University of British Columbia. Our board of directors believes Mr. Holler is qualified to serve on our board of directors because of his experience as a biotechnology entrepreneur and venture capitalist and his knowledge and perspective on our company.

Gary Patou, M.B. B.S., M.D. has served as a member of our board of directors since January 2004. Dr. Patou has been a managing director of MPM Capital, a venture capital fund, since May 2005. He has served as Chief Medical Officer of Pacira Pharmaceuticals, Inc., a specialty pharmaceutical company, since January 2009. Dr. Patou has

previously served in various positions at private pharmaceutical companies, including as Chief Medical Officer for Peplin, Ltd. from June 2006 to April 2007, Chief Medical Officer at Cerimon Pharmaceuticals, Inc., from June 2005 to June 2006, and Chief Medical Officer at Oscient Pharmaceuticals, Inc. from February 2004 to April 2005. Dr. Patou has held a number of academic appointments at University College & Middlesex School of Medicine in London and holds an M.B. B.S. from University College Hospital, London and a B. Sc. in immunology from University College London. Our board of directors believes that Dr. Patou's qualifications to serve on our board of directors include his scientific background and extensive senior management experience in our industry.

Evan A. Stein, M.B. ChB., Ph.D., FRCPC, FCAP has served as a member of our board of directors since June 2011 and from June 2006 to June 2009. Dr. Stein previously served as Chief Scientific Officer and a member of the board of directors of Medpace LLC, a contract research organization servicing the pharmaceutical industry from January 2006 to December 2012. Medpace LLC was acquired by CCMP, a private equity firm, in 2011. Dr. Stein holds an M.B. ChB. and Ph.D. from the University of Witwatersrand Medical School in Johannesburg, South Africa. We believe that Dr. Stein's qualifications to serve on our board of directors include his senior management experience in our industry.

Board Composition and Risk Oversight

Our board of directors is currently composed of eight members. Six of our directors are independent within the meaning of the independent director guidelines of The NASDAQ Global Market, or NASDAQ. Dr. Stein and Mr. Evans were elected to our board of directors pursuant to a nomination process set forth in a shareholders agreement. Contingent upon the closing of this offering, the provisions in the shareholders agreement providing for the nomination process will be eliminated. The articles and by-laws to be in effect upon the completion of this offering provide that the number of directors shall be at least one up to a maximum of ten and will be fixed from time to time by resolution of the board of directors. Each of our directors is subject to election at each annual meeting of our shareholders. There are no family relationships among any of the directors or executive officers.

During our 2013 fiscal year, our board of directors met eight times, four of which were in person.

Our board of directors has an active role, as a whole and also at the committee level, in overseeing the management of our risks. Our board of directors is responsible for general oversight of risks and regular review of information regarding our risks, including credit risks, liquidity risks and operational risks. The compensation committee is responsible for overseeing the management of risks relating to our executive compensation plans and arrangements. The audit committee is responsible for overseeing the management of risks relating to accounting matters, financial reporting and potential conflicts of interest. The nominating and corporate governance committee is responsible for overseeing the management of risks associated with the independence of our board of directors. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, the entire board of directors is regularly informed through discussions with committee members about such risks. Our board of directors believes its administration of its risk oversight function has not affected our board of directors' leadership structure.

Director Independence

Upon the completion of this offering, we anticipate that our common shares will be listed on NASDAQ. Under the NASDAQ rules, independent directors must comprise a majority of a listed company's board of directors within a specified period of the completion of this offering. In addition, NASDAQ rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and governance committees be independent. Audit committee members must also satisfy the independence criteria set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended. Under NASDAQ rules, a director will only qualify as an "independent director" if, in the opinion of that company's board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

To be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his capacity as a member of the audit committee, the board of directors or any other board committee: (1) accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries; or (2) be an affiliated person of the listed company or any of its subsidiaries.

In October 2013, our board of directors undertook a review of its composition, the composition of its committees and the independence of directors and considered whether any director has a material relationship with us that could compromise his ability to exercise independent judgment in carrying out his responsibilities. Based upon information requested from and provided by each director concerning his background, employment and affiliations, including family relationships, our board of directors has determined that none of Mohammad Azab, Johnston Evans, Frank Holler, Gary Patou, Evan Stein and Michael Tarnow, representing six of our eight directors, has a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under NASDAQ rules. Our board of directors also determined that Frank Holler (chair), Johnston Evans and Michael Tarnow, who comprise our audit committee, Mohammad Azab (chair), Gary Patou and Michael Tarnow who comprise our compensation committee, and Gary Patou (chair), Mohammad Azab and Michael Tarnow who comprise our nominating and corporate governance committee, satisfy the independence standards for those committees established by applicable SEC rules and NASDAQ rules.

In making this determination, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our shares by each non-employee director.

Board Committees

Our board of directors has an audit committee, a compensation committee and a nominating and corporate governance committee, each of which has the composition and the responsibilities described below.

Audit Committee

Our audit committee oversees our corporate accounting and financial reporting process. Among other matters, the audit committee:

- approves the hiring, discharging and compensation of our independent auditors;
- oversees the work of our independent auditors;
- approves engagements of the independent auditors to render any audit or permissible non-audit services;
- reviews on a periodic basis, or as appropriate, our investment policy and recommends to the board of directors any changes to such policy;
- reviews company compliance with our investment policy;
- reviews the qualifications, independence and performance of the independent auditors;
- reviews financial statements, critical accounting policies and estimates;
- reviews the adequacy and effectiveness of our internal controls; and
- reviews and discusses with management and the independent auditors the results of our annual audit, our quarterly financial statements and our publicly filed reports.

The current members of our audit committee are Frank Holler, Johnston Evans and Michael Tarnow. Mr. Holler serves as the chair of the committee. All members of our audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and NASDAQ. Our audit committee chair, Mr. Holler, is our audit committee financial expert, as that term is defined under the SEC rules implementing Section 407 of the Sarbanes-Oxley Act of 2002, and possesses financial sophistication, as defined under NASDAQ rules. Under the rules of the SEC and NASDAQ, members of the audit committee must also meet heightened independence standards. Our board of directors has determined that each of Messrs. Holler, Evans and Tarnow meet these heightened independence standards. Our audit committee will operate under a written charter, to be effective prior to the completion of this offering, that satisfies the applicable standards of the SEC and NASDAQ.

During 2013, our audit committee met six times.

Compensation Committee

Our compensation committee oversees our compensation policies, plans and benefits programs. Among other matters, the compensation committee:

- reviews and recommends policies relating to compensation and benefits of our directors, officers and employees;

- reviews and approves corporate goals and objectives relevant to compensation of our chief executive officer and other senior officers;
- evaluates the performance of our officers in light of established goals and objectives;
- recommends compensation of our officers based on its evaluations; and
- administers the issuance of stock options and other awards under our stock plans.

The current members of our compensation committee are Mohammad Azab, Gary Patou and Michael Tarnow. Dr. Azab serves as the chair of the committee. Each of the members of our compensation committee is an independent, outside and non-employee director under the applicable rules and regulations of the SEC, NASDAQ, the Internal Revenue Code of 1986, as amended, and the guidelines contained in National Instrument 58-201—Corporate Governance Guidelines, relating to compensation committee independence. Our compensation committee will operate under a written charter, to be effective prior to the completion of this offering, that satisfies the applicable standards of the SEC and NASDAQ.

During 2013, our compensation committee met four times.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee oversees and assists our board of directors in reviewing and recommending nominees for election as directors. Among other matters, the nominating and corporate governance committee:

- evaluates and makes recommendations regarding the organization and governance of the board of directors and its committees;
- assesses the performance of members of the board of directors and makes recommendations regarding committee and chair assignments;
- recommends desired qualifications for board of directors membership and conducts searches for potential members of the board of directors; and
- reviews and makes recommendations with regard to our corporate governance guidelines.

The current members of our nominating and corporate governance committee are Mohammad Azab, Gary Patou and Michael Tarnow. Dr. Patou serves as the chair of the committee. Each of the members of our nominating and corporate governance committee is an independent director under the applicable rules and regulations of the SEC and NASDAQ relating to nominating and corporate governance committee independence. Our nominating and corporate governance committee will operate under a written charter, to be effective prior to the completion of this offering, that satisfies the applicable standards of the SEC and NASDAQ.

During 2013, our nominating and corporate governance committee did not meet.

Our board of directors may from time to time establish other committees.

Director Compensation

Pre-IPO Director Compensation Policies

In January 2012, our board of directors established a policy, or the 2012 director compensation policy, with respect to the compensation of directors, effective January 1, 2012.

For the purposes of the director compensation policy, our board of directors classified each director into one of the three following categories: (1) a “management director” is a director who is also an officer, or employed by us in a management role; (2) a “non-management director” is a director who is not an officer, and not employed by us in a management role; and (3) the chair of the board of directors. Management directors receive no compensation for their services on the board of directors.

Our 2012 director compensation policy provides that, effective January 1, 2012, we shall pay a combination of cash compensation and equity compensation to our non-management directors and the chair of our board of directors.

Our 2012 director compensation policy further provides that each of our non-management directors is eligible to receive:

(1) $2,500 for each regular quarterly meeting of the full board of directors that a director attends for the full meeting either in person, or in part in person and in part by teleconference or videoconference, or $1,250 for each regular quarterly meeting that a director attends for the full meeting by teleconference or videoconference, with such amounts payable within 30 days following the date of each board meeting;
(2) upon commencement of service as our director, an option to purchase a number of our common shares determined by our board of directors up to a maximum of 5,144 shares; and
(3) on an annual basis, to be granted on or about January 1 of each year, options as determined by our board of directors as follows:
    (i) up to a maximum of 1,028 options for service as a director,
    (ii) up to a maximum of 1,028 additional options for service on our audit committee and/or our compensation committee (or 2,057 additional options for service on both such committees),
    (iii) up to a maximum of 1,028 additional options for service as chair of our audit committee or as chair of our compensation committee (or 2,057 additional options for service as chair on both such committees),
    (iv) up to a maximum of 411 additional options for service as a member of our nominating and corporate governance committee, and
    (v) up to a maximum of 411 additional options for service as chair of our nominating and corporate governance committee.

Our 2012 director compensation policy further provides that, effective January 1, 2012, the chair of our board of directors receives:

(1) $3,000 for each regular quarterly meeting of the full board of directors that the chair attends for the full meeting, in lieu of the amount the chair may otherwise receive for attendance as a non-management director, with such amount payable within 30 days following the date of each board meeting; and
(2) upon commencement of service, or agreement to continue service as the chair of our board of directors for a six-month term, an option to purchase a number of our common shares determined by our board of directors up to a maximum of 2,057 shares, granted on or about January 1 and July 1.

Our 2012 director compensation policy further provides that in the event that a new chair is appointed before the completion of any six-month period noted above, our board of directors may, at its discretion, grant up to a maximum of 10,000 options to such newly-appointed chair on the date of appointment.

In January 2013, our board of directors amended our director compensation policy by increasing the cash compensation component while maintaining the stock option component of the 2012 director compensation policy.

Our revised director compensation policy, or 2013 director compensation policy, provides that, effective April 1, 2013, each of our non-management directors receives $5,000 for each regular quarterly meeting of the full board of directors that a director attends for the full meeting in person, or $2,000 for each regular quarterly meeting that a director attends for the full meeting either by teleconference or videoconference or in part in person and in part by teleconference or videoconference, with such amounts payable within 30 days following the date of each board meeting.

Our 2013 director compensation policy further provides that, effective January 1, 2013, the chair of our board of directors receives $6,000 for each regular quarterly meeting of the full board of directors that the chair attends for the full meeting, in lieu of the amount the chair may otherwise receive for attendance as a non-management director, with such amount payable within 30 days following the date of each board meeting.

All of the above options will be granted under our then effective equity plan, and will vest pursuant to a three-year vesting schedule, with one-third vesting on the first year anniversary of the grant date, and the remaining two-thirds vesting monthly over the course of the next two years, in equal amounts, on the last day of each month subject to the recipient's continued service through each vesting date and the terms of our then effective equity plan as described in the section entitled "Management—Employee Benefit and Stock Plans."

The following table sets forth information concerning the compensation paid or accrued for services rendered to us by members of our board of directors for the year ended December 31, 2013. Dr. Simon Pimstone, our President and Chief Executive Officer, did not receive any additional compensation for service on our board of directors. Compensation paid or accrued for services rendered to us by Dr. Pimstone in his role as chief executive officer is included in our disclosures related to executive compensation in the section of this prospectus captioned "Executive Compensation."

Name	FEES EARNED OR PAID IN CASH[1] ($)	OPTION AWARDS[2][3] ($)	ALL OTHER COMPENSATION[1][2] ($)	TOTAL[1] ($)
Mohammad Azab [4]	14,500	8,292	—	22,792
Johnston L. Evans [4]	17,500	—	—	17,500
Michael R. Hayden [4]	6,500	13,820	82,921[6]	103,241
Frank A. Holler [4]	17,500	19,348	—	36,848
Gary Patou [4]	17,500	5,528	—	23,028
Evan A. Stein [4]	17,500	2,764	—	20,264
Michael M. Tarnow [4][5]	21,000	24,876	—	45,876

(1) Except as otherwise indicated, compensation amounts that were paid in Canadian dollars have been converted to U.S. dollars for purposes of the table. The U.S. dollar per Canadian dollar exchange rate used for such conversion was 0.9713, which was the average Bank of Canada exchange rate for the 2013 fiscal year.

(2) Represents the aggregate grant date fair value of stock option awards granted in 2013. These amounts have been computed in accordance with Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 718, using the Black-Scholes option pricing model without regard to estimated forfeitures. For a discussion of valuation assumptions, see the notes to our financial statements included elsewhere in this prospectus. The exercise price for stock options was denominated in Canadian dollars on the date of grant. The amounts reflected in this column were converted to U.S. dollars using the U.S. dollar per Canadian dollar exchange rate on January 1, 2013, the date of grants, which is 1.0051. For further information regarding the equity compensation of our directors, see the section "Executive Compensation—Employee Benefit and Stock Plans—Amended and Restated Stock Option Plan."

(3) As of December 31, 2013, the below listed directors beneficially held outstanding options to purchase the number of common shares as follows: Dr. Azab (46,488 shares); Mr. Evans (zero shares); Dr. Hayden (146,088 shares, of which 54,012 shares are held by Dr. Hayden and 92,076 shares are held by Genworks Inc., Dr. Hayden's consulting company); Mr. Holler (109,040 shares); Dr. Patou (41,344 shares); Dr. Stein (9,255 shares); and Mr. Tarnow (91,748 shares).

(4) Non-management director.

(5) Chair of our board of directors.

(6) Consists of $82,921 in stock options awarded to Genworks Inc., Dr. Hayden's consulting company as compensation for consulting services.

Grant of Stock Option to Genworks, Inc.

Genworks Inc., or Genworks, is controlled by Dr. Michael Hayden, one of our directors. From time to time, we have paid consulting fees to Genworks in consideration of certain scientific consulting services provided by Dr. Hayden. Pursuant to the terms of our agreement with Genworks, our board of directors has the ability to grant discretionary bonuses to Genworks related to Dr. Hayden's provision of services as our chief scientific officer. In January 2013, in recognition of the services Dr. Hayden rendered to us in 2012, our board of directors exercised its discretion and granted Genworks an option to purchase 30,864 of our common shares at an exercise price of CAD$2.67 per share. One quarter of the shares underlying this option vest on the first anniversary of the grant date, with the remainder of the shares vesting on a monthly basis over the next three years, subject to Genworks' continuing status as a service provider to us. While we do retain the services of Genworks from time to time, Dr. Hayden no longer provides services to us as our chief scientific officer.

Post-IPO Director Compensation Policy

In August 2013, our board of directors approved a policy, or the post-IPO director compensation policy, with respect to the compensation of directors that will become effective following our initial public offering and replace our 2013 director compensation policy. For purposes of the policy, our board of directors maintained the categories of management director, non-management director and chair of our board of directors.

Non-management directors and the chair of our board of directors will be eligible to receive compensation in the form of equity and cash under the post-IPO director compensation policy, as described below. Management directors receive no compensation for their services on our board of directors.

Equity Compensation

Each non-management director (including the chair of the board of directors) will be eligible to receive on the date of effectiveness of the registration statement of which this prospectus forms a part, and, if a new director, upon joining the board of directors, an option to purchase 5,144 of our common shares. Beginning in 2015, each non-management director (including the chair of our board of directors) will be eligible to receive, on an annual basis, an option to purchase 3,086 of our common shares.

In addition to the annual grant, the chair of our board of directors will receive an option to purchase 1,028 of our common shares. This additional annual grant will be granted at the same time as and have the same terms and conditions as the annual grant made to each of our non-management directors.

The exercise price per share of each of the above grants will be the fair market value of one of our common shares (determined pursuant to our then-effective equity plan) on the date of the grant. For the option grants to the non-management directors on the effective date of the registration statement of which this prospectus forms a part, the exercise price per share will equal the initial public offering price.

All of the above options granted to our non-management directors (including the chair of our board of directors) will be under our then-effective equity plan. The shares underlying the above initial and annual grants will vest as to one-third of the total shares subject to such award on the one year anniversary of the grant date, one-third of the total shares on the two year anniversary of the grant date and the balance of the total shares on the three year anniversary of the grant date.

The vesting of each grant described above will be subject to the recipient's continued service as a director through each vesting date and the other terms and conditions of our then-effective equity plan and the applicable option agreement with that director.

Cash Compensation

For each fiscal year, each non-management director (including the chair of the board of directors) will receive an annual cash retainer of $35,000 for serving on the board of directors. In addition to the annual retainer, the chair of our board of directors will receive an additional annual cash retainer of $25,000.

The chairs of the three standing committees of our board of directors will be entitled to the following cash retainers for each fiscal year as follows:

BOARD COMMITTEE	CHAIR RETAINER
Audit Committee	$ 15,000
Compensation Committee	$ 10,000
Nominating and Corporate Governance Committee	$ 7,250

The non-chair members of the three standing committees of our board of directors will be entitled to the following cash retainers for each fiscal year as follows:

BOARD COMMITTEE	MEMBER RETAINER
Audit Committee	$ 7,500
Compensation Committee	$ 5,000
Nominating and Corporate Governance Committee	$ 3,750

All cash payments will be payable in four equal installments on the date of our annual meeting, and on the last day of the third month, sixth month and ninth month thereafter, during which such individual served as a director or chair of our board of directors or of the applicable committee (such payments to be prorated for service during a portion of such quarter).

All directors will be reimbursed for standard travel expenses incurred in their capacities as directors and/or committee members.

Compensation Committee Interlocks and Insider Participation

During the fiscal year ended December 31, 2013, Drs. Azab and Patou and Mr. Tarnow served as members of our compensation committee. No such person is currently, or has been at any time, one of our officers or employees. None of our executive officers currently serves, or has served during the last completed three fiscal years, as a member of the board of directors or compensation committee of any other entity that has or had one or more executive officers serving as a member of our board of directors or compensation committee.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that will be effective as of the effective date of the registration statement of which this prospectus forms a part and that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. Following the completion of this offering, the code of business conduct and ethics will be available on the investor section of our website at www.xenon-pharma.com. We intend to disclose on our website any amendment to, or waiver of, any provision of our code of business conduct and ethics applicable to our directors and executive officers required to be disclosed under the rules of the SEC and NASDAQ.

Indemnification Agreements and Directors' and Officers' Liability Insurance

We will enter into indemnification agreements with each of our directors and officers. For further information regarding the indemnification agreements with each of our directors and officers, see the section titled "Certain Relationships and Related Party Transactions—Indemnification Agreements and Directors' and Officers' Liability Insurance."

Under the Canada Business Corporations Act, or CBCA, we may indemnify our current or former directors or officers or any other individuals who act or have acted at our request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges, and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of his or her association with us or the other entity. The CBCA also provides that we may advance moneys to a director, officer or other individual for costs, charges and expenses reasonably incurred in connection with such a proceeding. The individual shall repay the moneys to us if indemnification of the individual is ultimately prohibited under the CBCA, as described below.

Indemnification is prohibited under the CBCA unless the individual:

- acted honestly and in good faith with a view to our best interests, or the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at our request;
- in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that his or her conduct was lawful; and
- was not judged by the court or other competent authority to have committed any fault or omitted to do anything that the individual ought to have done.

Our by-laws require us to indemnify each of our directors, officers, former directors or officers or persons who act or acted at our request as a director or officer, or an individual acting in a similar capacity, of another body corporate to the fullest extent permitted under the CBCA. We will indemnify such individual against all costs, charges and expenses, including an amount paid to settle an action or proceeding to which the individual is made a party by reason of being or having been a director of officer of us or such body corporate. However, we shall not indemnify such individual if the individual did not act honestly and in good faith with a view to our best interests or, in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual did not have reasonable grounds for believing that his or her conduct was lawful.

Our by-laws authorize us, with the approval of our board of directors, to purchase and maintain insurance for the benefit of any persons our board of directors may from time to time determine.

EXECUTIVE COMPENSATION

2013 Summary Compensation Table

The following table provides information regarding the compensation of our named executive officers during the year ended December 31, 2013.

Name and Principal Position	YEAR	SALARY (1)	BONUS (1)	OPTION AWARDS (2)	NON-EQUITY INCENTIVE PLAN (1)(3)	ALL OTHER COMPENSATION (1)	TOTAL (1)
Simon N. Pimstone	2013	$369,851	$ —	$ 190,867	$115,578	$20,639(4)	$696,935
President and Chief Executive Officer	2012	366,371	100,060(5)	113,571	183,185	18,519(4)	781,706
Ian C. Mortimer	2013	64,169	9,713(6)	402,465	19,749	3,411(7)	499,507
Chief Financial Officer							
Y. Paul Goldberg	2013	281,010	3,450(8)	35,932	59,012	16,197(9)	395,601
Vice President,	2012	278,365	25,015(5)	15,143	83,507	14,072(9)	416,102
Clinical Development							

(1) Except as otherwise indicated, compensation amounts were paid in Canadian dollars and have been converted to U.S. dollars for purposes of the table. For 2013, the U.S. dollar per Canadian dollar exchange rate used for such conversion was 0.9713 which was the average Bank of Canada exchange rate for the 2013 fiscal year. For 2012, the U.S. dollar per Canadian dollar exchange rate used for such conversion was 1.0006 which was the average Bank of Canada exchange rate for the 2012 fiscal year.

(2) Represents the aggregate grant date fair value of stock option awards granted in 2013. These amounts have been computed in accordance with Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 718, using the Black-Scholes option pricing model without regard to estimated forfeitures. For a discussion of valuation assumptions, see the notes to our financial statements included elsewhere in this prospectus and the critical accounting policy discussions in the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operation — Critical Accounting Policies — Share-Based Compensation”. The exercise price for stock options were denominated in Canadian dollars on the date of grant. The amounts reflected in this column were converted to U.S. dollars using the U.S. dollar per Canadian dollar exchange rate on January 1, 2012, September 24, 2012, January 1, 2013, January 14, 2013 and August 1, 2013, the dates of grant, which is 0.9833, 1.0203, 1.0051, 1.0163 and 0.9673, respectively.

(3) The amount represents payments earned in 2012 and 2013 under the 2012 and 2013 Compensation Program Bonus Plan, which were paid in February 2013 and February 2014, respectively as discussed under the sections titled “Executive Compensation —2013 Non-Equity Incentive Plan Payments” and ‘‘Executive Compensation — 2012 Non-Equity Incentive Plan Payments”. Mr. Mortimer’s payment was prorated to reflect the commencement of his employment with us in the fourth quarter of 2013.

(4) Of the total amount for 2013, (i) $596 represents life insurance premiums through our group extended benefit plan, (ii) $1,550 represents provincial health care premiums and (iii) $18,493 represents contributions to our registered retirement savings plan. Of the total amount for 2012, (i) $616 represents life insurance premiums through our group extended benefit plan and (ii) $17,903 represents contributions to our registered retirement savings plan.

(5) These amounts for Drs. Pimstone and Goldberg represent bonus payments earned in 2012, which were paid on a discretionary basis and were related to the successful negotiation and entry into our collaboration with Teva Pharmaceutical Industries Ltd., or Teva. All such amounts were paid in February 2013.

(6) Mr. Mortimer joined our company as the Chief Financial Officer in October 2013. This bonus represents an amount paid in 2013 upon execution of his employment agreement.

(7) Of the total amount, (i) $91 represents life insurance premiums through our group extended benefit plan, (ii) $388 represents provincial health care premiums and (iii) $2,932 represents contributions to our registered retirement savings plan.

(8) This amount represents a discretionary bonus paid in 2013 to Dr. Goldberg in recognition of his efforts related to our preparation for this offering.

(9) Of the total amount for 2013, (i) $596 represents life insurance premiums through our group extended benefit plan, (ii) $1,550 represents provincial health care premiums and (iii) $14,051 represents contributions to our registered retirement savings plan. Of the total amount for 2012, (i) $616 represents life insurance premiums through our group extended benefit plan and (ii) $13,456 represents contributions to our registered retirement savings plan.

Non-Equity Incentive Plan Compensation

2013 Non-Equity Incentive Plan Payments

For 2013, the target incentive amounts and the aggregate annual payments earned by our named executive officers under our 2013 Compensation Program Bonus Plan were the following:

Named Executive Officer	TARGET AWARD [1] OPPORTUNITY	% ACHIEVEMENT	ACTUAL AWARD AMOUNT
Simon N. Pimstone	$ 184,926	62.5%	$115,578
Ian C. Mortimer[2]	19,749	100.0	19,749
Y. Paul Goldberg	84,303	70.0	59,012

(1) Except as otherwise indicated, compensation amounts were paid in Canadian dollars and have been converted to U.S. dollars for purposes of the table. The U.S. dollar per Canadian dollar exchange rate used for such conversion was 0.9713 which was the average Bank of Canada exchange rate for the 2013 fiscal year.

(2) Mr. Mortimer joined our company as the Chief Financial Officer in October 2013. This bonus represents an amount paid in 2013 upon execution of his employment agreement.

2012 Non-Equity Incentive Plan Payments

For 2012, the target incentive amounts and the aggregate annual payments earned by our named executive officers under our 2012 Compensation Program Bonus Plan were the following:

Named Executive Officer	TARGET AWARD [1] OPPORTUNITY	ACTUAL AWARD AMOUNT
Simon N. Pimstone	$ 183,185	$ 183,185
Y. Paul Goldberg	83,507	83,507

(1) Except as otherwise indicated, compensation amounts were paid in Canadian dollars and have been converted to U.S. dollars for purposes of the table. The U.S. dollar per Canadian dollar exchange rate used for such conversion was 1.0006 which was the average Bank of Canada exchange rate for the 2012 fiscal year.

Annual Performance-Based Bonus Plan

Our 2013 Compensation Program Bonus Plan provides our named executive officers with an opportunity for an annual incentive compensation payment for achievement of our corporate performance goals as well as individual performance. The target annual opportunity for each of our named executive officers remained unchanged from 2012. The annual incentive payments are calculated by weighting corporate goal attainment and individual goal attainment for each named executive officer. For 2013, the corporate and individual weighting was 80% corporate with the remainder tied to individual goals for Dr. Goldberg, 100% individual for Mr. Mortimer, and 100% corporate for Dr. Pimstone. Our 2013 corporate-level goals included establishing proof-of-concept data for topical TV-45070, declaring a new product candidate as a development track candidate, securing funding for at least 22 full-time employees, completing at least one new pharmaceutical collaboration and operating within our planned budget for the fiscal year. For 2013, our board of directors determined that we achieved 62.5% of our corporate-level goals. Our board of directors determined that Dr. Goldberg achieved 70% of his individual objectives and Mr. Mortimer achieved 100% of his individual objectives.

Our 2012 Compensation Program Bonus Plan provides our named executive officers with an opportunity for an annual incentive compensation payment subject to achievement of our corporate performance goals as well as individual performance. For 2012, our corporate-level goals included establishing proof-of-concept data for topical TV-45070, declaring a new product candidate as a development track candidate, securing funding for at least 20 full-time employees, completing at least one new pharmaceutical collaboration and operating within our planned budget for the fiscal year. For 2012, we achieved all of our corporate-level goals at target levels. The individual goals for 2012 related generally to each named executive officer's overall contributions in his or her roles towards reaching our corporate goals. The following was our determination of individual goal attainment in 2012: Dr. Pimstone, 100%; and Dr. Goldberg, 100%. The target bonus percentage for each of our named executive officers was determined through executive employment arrangements, set forth below. The annual incentive payments are

calculated by weighing corporate goal attainment and individual goal attainment for each named executive officer at 75% corporate/25% individual for Dr. Goldberg and 100% corporate for Dr. Pimstone.

Discretionary Bonuses

Our board of directors may, in certain circumstances, authorize the payment of discretionary bonuses to our executive officers and other employees. For 2012, each of Drs. Pimstone and Goldberg were awarded a discretionary bonus by our board of directors in connection with their involvement with the successful negotiation and execution of our collaborative arrangement with Teva. Also, in 2013, Dr. Goldberg was awarded a discretionary bonus by our board of directors in recognition of his efforts related to our preparation for this offering.

Executive Employment Arrangements

Dr. Simon N. Pimstone

We entered into an offer letter agreement on October 3, 2014 with Dr. Pimstone, our President and Chief Executive Officer. The offer letter agreement is for an indefinite term. Dr. Pimstone's current annual base salary is CAD$392,202, and he is eligible for an annual incentive payment up to 50% of his base salary, subject to achievement of performance metrics. The offer letter agreement also requires Dr. Pimstone to enter into an employee non-disclosure, non-solicitation and non-competition agreement that also deals with confidentiality and the ownership of intellectual property developments. Additionally, the offer letter agreement provides for severance benefits if Dr. Pimstone is terminated without cause or resigns for good reason in connection with a change of control. For details regarding our current obligations under such circumstances, please see "Termination Benefits" below.

Mr. Ian C. Mortimer

We entered into an offer letter agreement on October 3, 2014 with Mr. Mortimer, our Chief Financial Officer. Mr. Mortimer's current annual base salary is CAD$311,100, and he is eligible for an annual incentive payment up to 40% of his base salary, subject to achievement of performance metrics. The offer letter agreement also requires Mr. Mortimer to enter into an employee non-disclosure, non-solicitation and non-competition agreement that also deals with confidentiality and the ownership of intellectual property developments. Additionally, the offer letter agreement provides for severance benefits if Mr. Mortimer is terminated without cause or resigns for good reason in connection with a change of control. For details regarding our current obligations to Mr. Mortimer under such circumstances, please see "Termination Benefits" below.

Dr. Y. Paul Goldberg

We entered into an offer letter agreement on October 3, 2014 with Dr. Goldberg, our Vice President of Clinical Development. The offer letter agreement is for an indefinite term. Dr. Goldberg's current annual base salary is CAD$299,439, and he is eligible for an annual incentive payment up to 35% of his base salary, subject to achievement of performance metrics. The offer letter agreement also requires Dr. Goldberg to enter into an employee non-disclosure, non-solicitation and non-competition agreement that also deals with confidentiality and the ownership of intellectual property developments. Additionally, the offer letter agreement provides for severance benefits if Dr. Goldberg is terminated without cause or resigns for good reason in connection with a change of control. For details regarding our current obligations under such circumstances, please see "Termination Benefits" below.

Ms. Karen Corraini

We entered into an offer letter agreement on October 3, 2014 with Ms. Corraini, our General Counsel and Corporate Secretary. The offer letter agreement is for an indefinite term. Ms. Corraini's current annual base salary is CAD$261,353, and she is eligible for an annual incentive payment up to 35% of her base salary, subject to achievement of performance metrics. The offer letter agreement also requires Ms. Corriani to enter into an employee non-disclosure, non-solicitation and non-competition agreement that also deals with confidentiality and the ownership of intellectual property developments. Additionally, the offer letter agreement provides for severance benefits if Ms. Corraini is terminated without cause or resigns for good reason in connection with a change of control. For details regarding our current obligations under such circumstances, please see "Termination Benefits" below.

Dr. Robin Sherrington

We entered into an offer letter agreement on October 3, 2014 with Dr. Sherrington, our Senior Vice President of Business and Corporate Development. The offer letter agreement is for an indefinite term. Dr. Sherrington's current annual base salary is CAD$255,397, and he is eligible for an annual incentive payment up to 35% of his base salary, subject to achievement of performance metrics. The offer letter agreement also requires Dr. Sherrington to enter into an employee non-disclosure, non-solicitation and non-competition agreement that also deals with confidentiality and the ownership of intellectual property developments. Additionally, the offer letter agreement provides for severance benefits if Dr. Sherrington is terminated without cause or resigns for good reason in connection with a change of control.

Termination Benefits

Our offer letter agreements with each of Drs. Pimstone, Goldberg and Sherrington, Mr. Mortimer and Ms. Corraini provide that we may terminate the applicable executive's employment without cause upon providing the executive with working notice of termination, a lump sum payment of base salary in lieu of such notice in the amount of 12 months plus one additional month for every one year of consecutive service with us, up to a combined maximum of 18 months, or the Payment Period, or an equivalent combination of working notice and such payment. If we provide the executive with any base salary payment in lieu of notice, we will (i) arrange for continued coverage for the executive under our group benefits insurance until the Payment Period ends or the executive commences full-time employment, subject to the applicable insurer's terms of coverage (and if the insurer does not continue coverage, pay the executive an amount equal to what the monthly premiums for such continued coverage would have cost), (ii) pay the executive a pro-rated portion of his or her Average Bonus (as defined below), (iii) pay the executive the contributions to our group RRSP plan that we would have paid on his or her behalf for the balance of the Payment Period, (iv) provide for options granted under our Amended and Restated Stock Option Plan and any prior stock option plan to continue to vest during the Payment Period and remain exercisable for three months following the end of the Payment Period, and (v) provide for options and other deferred compensation granted under our 2014 Equity Incentive Plan or any subsequent incentive compensation plan to continue to vest for three months following the date the executive's employment terminates and remain exercisable for up to six months following termination of employment. "Average Bonus" means an amount that is (i) the sum of the annual bonus awards (expressed as a percentage of the applicable year's base salary) that the executive earned in each of the three completed calendar years preceding the date the executive's employment terminates, divided by (ii) three, and multiplied by (iii) the executive's base salary at the time his or her employment terminates. If the executive's employment is terminated after an event constituting grounds for good reason occurs either (1) prior to but in connection with a change of control or (2) within 12 months after a Change of Control (as such terms are defined in the offer letter agreement), we will (i) pay the executive his or her base salary for the Payment Period, (ii) pay the executive a pro-rated portion of his or her Average Bonus, (iii) arrange for continued coverage for the executive under our group benefits insurance until the Payment Period ends or the executive commences full-time employment, subject to the applicable insurer's terms of coverage (and if the insurer does not continue coverage, pay the executive an amount equal to what the monthly premiums for such continued coverage would have cost), (iv) pay the executive any unpaid contributions to our group RRSP plan for the period leading up to the termination of employment and the contributions to the group RRSP plan that we would have paid during the Payment Period, (v) fully accelerate the vesting of all of the executive's unvested share options and other deferred compensation awards, and (vi) provide for the continued exercisability of the executive's share options and other deferred compensation awards for (A) 90 days from the end of the Payment Period for such options and awards granted under our Amended and Restated Stock Option Plan or any prior stock option plan or (B) the longer of the period stipulated in the applicable plan or grant and six months from the termination of your employment for such options and awards granted under our 2014 Equity Incentive Plan or any subsequent deferred compensation plan.

Our named executive officers are not entitled to special benefits upon a change in control, except for the potential vesting acceleration of their stock options. For a description of such benefits, see below under "– Outstanding Equity Awards of Fiscal Year-End" and "Employee Benefit Plans."

Outstanding Equity Awards at Fiscal Year-End

The following table presents information concerning equity awards held by our named executive officers at December 31, 2013.

	OPTION AWARDS				
		NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS (#)			
NAME	VESTING COMMENCEMENT DATE	EXERCISABLE	UNEXERCISABLE	OPTION EXERCISE PRICE (CAD$)	OPTION EXPIRATION DATE
Simon N. Pimstone	1/1/2004	15,432 (1)	—	6.07	12/31/2013
	10/1/2004	5,144 (1)	—	6.07	9/30/2014
	1/11/2005	15,432 (1)	—	6.07	1/10/2015
	8/1/2006	12,345 (1)	—	3.74	7/31/2016
	1/1/2008	10,288 (1)	—	3.74	12/31/2017
	6/27/2008	36,008 (1)	—	3.74	6/26/2018
	1/1/2009	9,259 (1)	—	3.74	12/31/2018
	9/1/2009	12,345 (1)	—	3.74	8/31/2019
	1/1/2010	6,172 (1)	—	3.74	12/31/2019
	1/1/2011	16,975 (1)	5,658 (1)	3.74	12/31/2020
	1/1/2012	10,288 (1)	10,288 (1)	3.74	12/31/2021
	1/1/2012	5,144 (1)	5,144 (1)	3.74	12/31/2021
	1/1/2013	—	41,152 (1)	2.67	12/31/2022
	3/10/2013	—	30,864 (1)	2.67	3/9/2023
Ian C. Mortimer	8/1/2013	—	42,592 (1)	9.76	7/31/2023
Y. Paul Goldberg	1/1/2004	1,234 (1)	—	6.07	12/31/2013
	10/1/2004	1,028 (1)	—	6.07	9/30/2014
	1/11/2005	2,057 (1)	—	6.07	1/10/2015
	1/1/2006	411 (1)	—	6.07	12/31/2015
	1/1/2007	2,057 (1)	—	3.74	12/31/2016
	1/1/2008	1,028 (1)	—	3.74	12/31/2017
	1/1/2009	5,144 (1)	—	3.74	12/31/2018
	1/1/2010	6,172 (1)	—	3.74	12/31/2019
	7/2/2010	3,395 (2)	308 (2)	3.74	7/1/2020
	12/2/2010	3,487 (2)	628 (2)	3.74	12/1/2020
	1/1/2011	18,519 (1)	6,172 (1)	3.74	12/31/2020
	1/1/2011	6,858 (2)	1,372 (2)	3.74	12/31/2020
	1/1/2012	1,029 (1)	1,028 (1)	3.74	12/31/2021
	1/1/2012	1,371 (2)	685 (2)	3.74	12/31/2021
	1/1/2013	514 (2)	514 (2)	2.67	12/31/2022
	1/1/2013	—	8,230 (1)	2.67	12/31/2022
	1/1/2013	—	4,115 (1)	2.67	12/31/2022

(1) Options vest over four years as follows: 25% of the shares vest one year following the vesting commencement date, with the remaining 75% vesting in equal monthly installments over the following three years. Notwithstanding the foregoing, if the named executive officer's employment is terminated other than for cause, because of death or disability or resigns for good reason, in each case, during the period beginning on, and ending 12 months after, a change in control, then 100% of the then-unvested shares vest.

(2) Options vest over four years as follows: one-third of the shares vest on the vesting commencement date, with the remaining two-thirds vesting in equal monthly installments over the following four years. Notwithstanding the foregoing, if the named executive officer's employment is terminated other than for cause, because of death or disability, or resigns for good reason, in each case, during the period on, and 12 months after, a change in control, then 100% of the then-unvested shares vest.

Employee Benefit and Stock Plans

2014 Equity Incentive Plan

In October 2013, our compensation committee adopted a 2014 Equity Incentive Plan, which was amended by our board of directors in April 2014. The 2014 Equity Incentive Plan, as amended, or the 2014 Equity Incentive Plan, was approved by our shareholders in June 2014. The 2014 Equity Incentive Plan will be effective one business day prior to the effective date of the registration statement of which this prospectus forms a part. Excluding option grants made to our non-management directors on the effective date of the registration statement of which this prospectus forms a part, we do not expect to use the 2014 Equity Incentive Plan until after the completion of this offering. Our 2014 Equity Incentive Plan will provide for the grant of incentive share options, which are "incentive stock options" within the meaning of Section 422 of the Internal Revenue Code, to our employees and any subsidiary corporations' employees, and for the grant of nonstatutory share options, restricted share, restricted share units, share appreciation rights, and performance shares to our employees, officers, directors and consultants and those of our subsidiary corporations.

The 2014 Equity Incentive Plan will continue in effect for a term of ten years from the date adopted, unless terminated earlier as permitted under the 2014 Equity Incentive Plan's provisions.

Authorized Shares. We reserved a total of 411,522 common shares for issuance pursuant to the 2014 Equity Incentive Plan of which no awards are issued and outstanding. The number of shares available for issuance under the 2014 Equity Incentive Plan will increase annually on the first business day of each fiscal year beginning in 2015 by an amount which shall be determined by the board of directors on or before the first business day of each fiscal year, such amount to be equal to the least of:

- 1,028,806 common shares;
- 4% of the outstanding common shares on the last business day of the immediately preceding fiscal year; or
- such other amount as the board of directors may determine.

Plan Administration. Our board of directors, or one or more committees appointed by our board of directors, will administer the 2014 Equity Incentive Plan. Subject to the provisions of our 2014 Equity Incentive Plan, the administrator has the power to determine the eligible persons to whom awards may be granted, the number of common shares to be covered by each award, the exercise price (provided that such exercise price may not be less than the lowest permitted under all applicable law), the forms of award agreements for use under the 2014 Equity Incentive Plan, and terms and conditions of any award. In the case of awards intended to qualify as "performance-based compensation" within the meaning of Section 162(m) of the U.S. Internal Revenue Code, the committee will consist of two or more "outside directors" within the meaning of Section 162(m). In addition, if our board of directors determines it is desirable to qualify transactions under the 2014 Equity Incentive Plan as exempt under Rule 16b-3 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, such transactions will be structured to satisfy the requirements for exemption under Rule 16b-3. Subject to the provisions of our 2014 Equity Incentive Plan, the administrator has the power to administer the plan, including but not limited to, the power to interpret the terms of the 2014 Equity Incentive Plan and awards granted under it, to create, amend and revoke rules relating to the 2014 Equity Incentive Plan, including creating sub-plans, and to determine the terms of the awards, including the exercisability of the awards and the form of consideration, if any, payable upon exercise. The administrator also has the authority to amend existing awards to reduce or increase their exercise price, to allow participants the opportunity to transfer outstanding awards to a financial institution or other person or entity selected by the administrator, and to institute an exchange program by which outstanding awards may be surrendered in exchange for awards of the same type which may have a higher or lower exercise price or different terms, awards of a different type and/or cash.

Share Options. We may grant share options under the 2014 Equity Incentive Plan. The exercise price of options granted under our 2014 Equity Incentive Plan must at least be equal to the fair market value of our common shares on the date of grant, provided that such price may not be less than the lowest exercise price permitted under applicable law. The term of an incentive share option may not exceed ten years, except that with respect to any participant who owns more than 10% of the voting power of all classes of our outstanding shares, the term must not exceed five years and the exercise price must equal at least 110% of the fair market value on the grant date. The administrator will determine the methods of payment of the exercise price of an option, which may include cash,

shares or other property acceptable to the administrator, as well as other types of consideration permitted by applicable law. After the termination of service of an employee, director or consultant, he or she may exercise his or her option for the period of time stated in his or her option agreement. Generally, the option will remain exercisable for 365 days if termination is due to death or disability or for 180 days if termination is due to retirement. In all other cases, the option will generally remain exercisable for 90 days following the termination of service. However, in no event may an option be exercised later than the expiration of its term except in certain circumstances where the expiration occurs during a blackout period as described more fully in the 2014 Equity Incentive Plan. Subject to the provisions of our 2014 Equity Incentive Plan, the administrator determines the other terms of options.

Share Appreciation Rights. We may grant share appreciation rights under our 2014 Equity Incentive Plan. Share appreciation rights allow the recipient to receive the appreciation in the fair market value of our common shares between the exercise date and the date of grant. Share appreciation rights may not have a term exceeding ten years. After the termination of service of an employee, director or consultant, the same expiration rules described above for options apply to share appreciation rights. Subject to the provisions of our 2014 Equity Incentive Plan, the administrator determines the other terms of share appreciation rights, including when such rights become exercisable and whether to pay any increased appreciation in cash or with our common shares, or a combination thereof, except that the per share exercise price for the shares to be issued pursuant to the exercise of a share appreciation right will be no less than 100% of the fair market value per share on the date of grant.

Restricted Shares. We may grant restricted share awards under our 2014 Equity Incentive Plan. Restricted share awards are grants of common shares that vest in accordance with terms and conditions established by the administrator. The administrator will determine the number of restricted share awards granted to any employee, director or consultant and, subject to the provisions of our 2014 Equity Incentive Plan, will determine the terms and conditions of such awards. The administrator may impose whatever conditions to vesting it determines to be appropriate (for example, the administrator may set restrictions based on the achievement of specific performance goals or continued service to us); provided, however, that the administrator, in its sole discretion, may accelerate the time at which any restrictions will lapse or be removed. Recipients of restricted share awards generally will have voting and dividend rights with respect to such shares upon grant without regard to vesting, unless the administrator provides otherwise. Restricted share awards that do not vest are subject to our right of repurchase or forfeiture.

Restricted Share Units. We may grant restricted share units under our 2014 Equity Incentive Plan. Restricted share units are bookkeeping entries representing an amount equal to the fair market value of one of our common shares. Subject to the provisions of our 2014 Equity Incentive Plan, the administrator determines the terms and conditions of restricted share units, including the vesting criteria (which may include accomplishing specified performance criteria or continued service to us) and the form and timing of payment (which may consist of any combination of cash or common shares). Notwithstanding the foregoing, the administrator, in its sole discretion may accelerate the time at which any restrictions will lapse or be removed.

Performance Shares. We may grant performance shares under our 2014 Equity Incentive Plan. Performance shares are awards that will result in a payment to a participant only if performance goals established by the administrator are achieved or the awards otherwise vest. The administrator will establish organizational or individual performance goals or other vesting criteria in its discretion, which, depending on the extent to which they are met, will determine the number and/or the value of performance shares to be paid out to participants. After the grant of performance shares, the administrator, in its sole discretion, may reduce or waive any performance criteria or other vesting provisions for such performance shares. Performance shares shall have an initial value equal to the fair market value of our common shares on the grant date. The administrator, in its sole discretion, may pay earned performance shares in the form of cash, in shares or in some combination thereof.

Outside Directors. Our 2014 Equity Incentive Plan provides that all outside directors will be eligible to receive all types of awards (except for incentive stock options) under the 2014 Equity Incentive Plan. In connection with this offering, we intend to implement a formal policy pursuant to which our outside directors will be eligible to receive equity awards under the 2014 Equity Incentive Plan. Our 2014 Equity Incentive Plan provides that in any given year an outside director will not receive (i) cash-settled awards having a grant date fair value greater than $500,000, increased to $1,000,000 in connection with his or her initial service; and (ii) share-settled awards having a grant date fair value greater than $500,000, increased to $1,000,000 in connection with his or her initial service, in each case, as determined under generally accepted accounting principles.

Non-Transferability of Awards. Unless the administrator provides otherwise, our 2014 Equity Incentive Plan generally will not allow for the transfer of awards and only the recipient of an award may exercise an award during his or her lifetime.

Certain Adjustments. In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under the 2014 Equity Incentive Plan, the administrator will adjust the number and class of shares that may be delivered under the 2014 Equity Incentive Plan and/or the number, class, and price of shares covered by each outstanding award, and the numerical share limits set forth in the 2014 Equity Incentive Plan.

Merger or Change in Control. Our 2014 Equity Incentive Plan provides that in the event of a merger or change in control, as defined under the 2014 Equity Incentive Plan, each outstanding award will be treated as the administrator determines, except that if a successor corporation or its parent or subsidiary does not assume or substitute an equivalent award for any outstanding award, then such award will fully vest, all restrictions on such award will lapse, all performance goals or other vesting criteria applicable to such award will be deemed achieved at 100% of target levels and such award will become fully exercisable, if applicable, for a specified period prior to the transaction. The award will then terminate upon the expiration of the specified period of time. If the service of an outside director is terminated on or following a change of control, other than pursuant to a voluntary resignation, his or her options and share appreciation rights will vest fully and become immediately exercisable, all restrictions on his or her restricted shares and restricted share units will lapse, and with respect to his or her performance shares, all performance goals or other vesting requirements will be deemed achieved at 100% of target levels and all other terms and conditions met.

Amendment, Termination. The administrator will have the authority to amend, suspend or terminate the 2014 Equity Incentive Plan provided such action does not impair the existing rights of any participant. Our 2014 Equity Incentive Plan will automatically terminate in 2024, unless we terminate it sooner pursuant to the provisions of the 2014 Equity Incentive Plan.

Amended and Restated Stock Option Plan

Our Amended and Restated Stock Option Plan, or our Stock Plan, was initially adopted by our board of directors and shareholders in June 1999. Our Stock Plan permits the grant of stock options to our directors, officers and other Service Providers (as defined in the Stock Plan). Our Stock Plan was most recently amended and restated in September 2014. In connection with this offering, we expect to terminate our Stock Plan with respect to any future grant of options and upon such termination, no other securities will be granted pursuant to the Stock Plan; however, our Stock Plan will continue to govern the terms and conditions of outstanding options granted thereunder.

Authorized Shares. The maximum aggregate number of our common shares reserved for issuance under the Stock Plan is 1,604,938 shares. Any common shares for which an option had been exercised are not included in determining whether the maximum number of common shares had been reached.

Plan Administration. Subject to the provisions of our Stock Plan, our board of directors has the power to determine the directors, officers and other Service Providers to whom options may be granted; to determine terms and conditions of options; and to extend the period of time following an optionee's termination of service within which the optionee's option may be exercised.

Stock Options. The per share exercise price of each option equals the market price of our common share on the date of grant, and each option has a term of up to ten years, subject to earlier termination upon an optionee's termination of service. After an optionee's termination of service, the optionee may exercise his or her option, to the extent vested as of such date of termination, (i) until 5:00 p.m. Vancouver time on the date of termination if the optionee's service was terminated for cause (as determined by us in our sole discretion), (ii) for 365 days following a termination of the optionee's service due to death or disability, or (iii)(a) for optionees other than non-employee and non-consultant directors, 90 days following a termination of the optionee's service for any other reason and (b) for options of our directors other than those directors that are employees or consultants, 24 months following a termination of the optionee's service, each for any other reason. As of the effective date of the registration statement of which this prospectus forms a part, the time period in (iii)(a) of the previous sentence shall be changed to 90 days. In no event may an option be exercised later than the expiration of its term except in certain circumstances

where the expiration occurs during a blackout period as described in greater detail in the Stock Plan. Our board of directors determined the remaining terms and conditions of an option, as our board of directors, in its discretion, deemed to be consistent with the Stock Plan. The specific terms of any grant of stock options are set forth in an award agreement between us and the recipient.

Transferability. Optionees may not assign their options or their rights under the Stock Plan.

Certain Adjustments. In the event of certain changes in our capitalization, to prevent diminution or enlargement of the benefits or potential benefits available under the Stock Plan, our board of directors may make proportional adjustments to the number of common shares that may be delivered under the Stock Plan and/or the number and price of shares covered by each outstanding option.

Merger, Dissolution, Liquidation, or other Change of Control. Our Stock Plan provides that in the event of a dissolution, liquidation, sale of all or substantially all of our assets; merger, consolidation, amalgamation, arrangement or reorganization in which we are not the surviving corporation; reverse merger in which we are the surviving corporation but our common shares are converted into other property; or an acquisition by any person, entity or group within the meaning of Section 13(d) of the Exchange Act of our securities representing at least 35% of the combined voting power entitled to vote in an election of directors, which we collectively refer to as a Change of Control, any successor corporation shall assume our obligations in respect of all outstanding options under our Stock Plan or shall substitute an equivalent option for all outstanding options under the Stock Plan. If a successor corporation does not assume or substitute for an outstanding option, then any options held by persons who are directors, officers, or Service Providers generally will fully vest and the time during which such option may be exercised shall be accelerated prior to the completion of the Change of Control. All options that are not assumed or are not substituted for will terminate unless exercised prior to the Change of Control. In the event of our merger into another corporation or other entity or any other Change of Control in which the options are assumed or substituted for by a successor corporation, the assumed options or the substitute options held by a director, officer or Service Provider will become fully vested and exercisable if, within 12 months following the Change of Control, either (i) the optionee's service is terminated by us or the successor corporation other than for Cause (as defined in the Stock Plan) or (ii) the optionee resigns for Good Reason (as defined in the Stock Plan).

Plan Amendment. Subject to any required regulatory approval, we may amend the Stock Plan at any time, provided that such amendment does not impair the existing rights of any optionee under any then-outstanding option.

Retirement and Pension Benefits

Our registered retirement savings plan, or RRSP Plan, provides Canadian resident employees with an opportunity to participate in a retirement savings plan. This type of retirement plan is a Canadian retirement plan with features similar to a 401(k) plan or an individual retirement account administered in the U.S. All of our named executive officers are eligible to participate in all of our employee benefit plans, in each case on the same basis as other employees. Under our current RRSP Plan, we match 100% of employee contributions by eligible employees up to a maximum of 5% of the employee's salary.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions since January 1, 2011 to which we have been a party, in which the amount involved exceeds $120,000, and in which any of our directors, executive officers, or holders of more than 5% of our shares, or an affiliate or immediate family member thereof, had or will have a direct or indirect material interest, other than compensation arrangements which are described under the sections of this prospectus captioned "Management—Director Compensation" and "Executive Compensation."

Related Person Transaction Policy

We have adopted a formal, written policy, which will become effective as of the effective date of the registration statement of which this prospectus forms a part, that our executive officers, directors (including director nominees), holders of more than 5% of any class of our voting securities, and any member of the immediate family of or any entities affiliated with any of the foregoing persons, are not permitted to enter into a related party transaction with us without the prior approval or, in the case of pending or ongoing related party transactions, ratification of our audit committee. For purposes of our policy, a related party transaction is a transaction, arrangement or relationship where we were, are or will be involved and in which a related party had, has or will have a direct or indirect material interest, other than transactions available to all of our employees.

Consulting Services Provided by Genworks, Inc.

Genworks Inc., or Genworks, is controlled by Dr. Michael Hayden, one of our directors. Consulting fees have been paid to Genworks in consideration of certain scientific consulting services provided by Dr. Hayden. During the fiscal years ended December 31, 2011, 2012, and 2013, and the six months ended June 30, 2014, we incurred cash consulting fees to Genworks in the amount of $278,622, $307,264, and $0, and $0, respectively. These amounts were paid in Canadian dollars and have been converted to U.S. dollars based on the average annual U.S. dollar per Canadian dollar exchange rate for the applicable year in which the amounts were paid. The U.S. dollar per Canadian dollar exchange rate used for such conversions is 1.0117, 1.0006, and 0.9713 respectively.

Pursuant to the terms of our agreement with Genworks, our board of directors has the ability to grant discretionary bonuses to Genworks related to Dr. Hayden's provision of services as our chief scientific officer. In January 2013, in recognition of the services Dr. Hayden rendered to us in 2012, our board of directors exercised its discretion and granted Genworks an option to purchase 30,864 of our common shares at an exercise price of CAD$2.67 per share. In January 2012, in recognition of the services Dr. Hayden rendered to us in 2011, our board of directors exercised its discretion and granted Genworks an option to purchase 10,288 of our common shares at an exercise price of CAD$3.74 per share. One quarter of the shares underlying these options vest on the first anniversary of the grant date, with the remainder of the shares vesting on a monthly basis over the next three years, subject to Genworks' continuing status as a service provider to us.

In addition to the options granted to Genworks, our board of directors awarded a performance bonus to Genworks in acknowledgment of services provided prior to September 1, 2012 relating to our sublicense agreement with uniQure Biopharma B.V., or uniQure. Pursuant to the terms of this performance bonus award, in the event that we receive royalty payments from uniQure satisfying certain pre-specified thresholds, Genworks has a right to receive a portion of such royalty payments, totaling up to CAD$600,000. Excluding any amounts owing to Genworks pursuant to the performance bonus relating to uniQure, as of September 1, 2012, no further cash consulting fees are payable to Genworks under such consulting agreement. While we do retain the services of Genworks from time to time, Dr. Hayden no longer provides services to us as our chief scientific officer.

Clinical and Regulatory Services Provided by Medpace, Inc.

During the fiscal years ended December 31, 2011 and 2012, we incurred contract research organization, or CRO, fees to Medpace, Inc., or Medpace, in the amount of $876,474 and $150,915, respectively. Dr. Evan A. Stein, one of our directors, is a former equityholder and former director of Medpace. These CRO fees were paid to Medpace in consideration of certain clinical development services provided by Medpace during this period by individuals other than Dr. Stein. None of these fees were paid directly to Dr. Stein. We are not currently party to a consulting agreement with Medpace and we do not expect to engage Medpace for CRO services in the future. The fees paid to

Medpace did not exceed 5% of the consolidated gross revenue of Medpace during any of these fiscal years and we made no payments to Medpace in 2013 or during the six months ended June 30, 2014.

Investor Rights Agreement

We have entered into an amended and restated investor rights agreement, dated December 6, 2006, as amended, with certain holders of our preferred shares, including entities affiliated with Fidelity Investments, entities affiliated with InterWest Partners and entities affiliated with Lipoterx, L.P., which provides these holders with, among other things, certain rights relating to the registration of our common shares. See the section of this prospectus captioned “Description of Share Capital—Registration Rights” for more information about the amended and restated investor rights agreement.

Amendments to Articles of Continuance

In June 2014, our shareholders approved certain amendments to our articles of continuance, which have the effect of, among other things, increasing in the number of common shares issuable upon conversion of our Series E preferred shares if the initial public offering price is below $16.55 per share. We expect to file the amendment effecting this change prior to the closing of this offering. For additional information regarding the conversion provisions of the Series E preferred shares, please see the section of this prospectus captioned “Description of Share Capital.”

Indemnification Agreements and Directors’ and Officers’ Liability Insurance

We will enter into indemnification agreements with each of our directors and officers. As provided by our by-laws, these agreements, among other things, will require us to indemnify each director and officer to the fullest extent permitted by the Canada Business Corporations Act, or CBCA, including indemnification of all costs, charges and expenses reasonably incurred by such person in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person’s services as a director or officer.

Requirements under the Canada Business Corporations Act

Pursuant to the CBCA, directors and officers are required to act honestly and in good faith with a view to the best interests of the company. Under the CBCA, subject to certain limited exceptions, a director who holds a disclosable interest in a material contract or transaction into which we have entered or propose to enter shall not vote on any directors’ resolution to approve the contract or transaction. A director or officer has a disclosable interest in a material contract or transaction if the director or officer is:

- a party to the contract or transaction;
- is a director or officer, or an individual acting in a similar capacity, of a party to the contract or transaction; or
- has a material interest in a party to the contract or transaction.

Generally, as a matter of practice, directors or officers who have disclosed a material interest in any contract or transaction that our board of directors is considering will not take part in any board discussion respecting that contract or transaction. If such directors were to participate in the discussions, they would abstain from voting on any matters relating to matters in which they have disclosed a disclosable interest.

PRINCIPAL SHAREHOLDERS

The following table sets forth information relating to the beneficial ownership of our common shares as of September 30, 2014 as adjusted to reflect the sale of common shares offered by us in this offering, for:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our outstanding common shares;
- each of our named executive officers;
- each of our directors; and
- all current executive officers and directors as a group.

The percentage of beneficial ownership prior to the offering shown in the table is based upon 9,085,716 common shares outstanding as of September 30, 2014, which assumes an initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus). The percentage of beneficial ownership after this offering shown in the table is based on 13,540,261 common shares outstanding after the closing of this offering and the concurrent private placement, assuming no exercise of the underwriters' option to purchase additional common shares.

Information with respect to beneficial ownership has been furnished by each director, officer or beneficial owner of more than 5% of our common shares. We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules take into account common shares issuable pursuant to the exercise of stock options or warrants that are either immediately exercisable or exercisable on or before the 60th day after September 30, 2014. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o Xenon Pharmaceuticals Inc., 200 – 3650 Gilmore Way, Burnaby, British Columbia V5G 4W8, Canada.

NAME OF BENEFICIAL OWNER	NUMBER OF SHARES BENEFICIALLY OWNED	PERCENTAGE OF SHARES BENEFICIALLY OWNED	
		BEFORE OFFERING	AFTER OFFERING
5% and Greater Shareholders			
Entities affiliated with MX Associates, LLP (1)	1,474,660	16.2%	10.9
Entities affiliated with Lipoterx, Ltd. (2)	1,038,964	11.4	7.7
Entities affiliated with InterWest Partners (3)	803,925	8.8	5.9
FMR LLC (4)	631,239	6.9	4.7
Executive Officers and Directors			
Simon N. Pimstone (5)	392,319	4.2	2.9
Ian Mortimer(6)	13,310	*	*
Y. Paul Goldberg (7)	71,407	*	*
Michael M. Tarnow (8)	142,608	1.6	1.0
Mohammad Azab (9)	46,441	*	*
Gary Bridger (10)	22,076	*	*
Karen Corraini (11)	69,234	*	*
Johnston L. Evans (12)	444,655	4.9	3.3
Michael Hayden (13)	324,786	3.5	2.4
Frank A. Holler (14)	279,622	3.0	2.0
Gary Patou (15)	40,430	*	*
Robin Sherrington (16)	63,575	*	*
Evan A. Stein (17)	1,050,053	11.5	7.7
Charles J. Cohen (18)	43,277	*	*
All current executive officers and directors as a group (14 persons) (19)	3,003,795	30.1	20.8

* Indicates beneficial ownership of less than 1% of the total outstanding common shares.

(1) Consists of 1,474,660 shares held by MX Associates, LLP. Dr. August Troendle, as the managing partner of MX Associates has sole voting and investment power with respect to the shares held by MX Associates, LLP. The address for this entity is 5375 Medpace Way, Cincinnati, Ohio 45227.

(2) Consists of 1,038,964 shares held by Lipoterx, Ltd. (“Lipoterx”). Lipoterx Holdings, LLC, the general partner of Lipoterx, has sole voting and investment power with respect to the shares held by Lipoterx. Dr. Stein, the managing partner of Lipoterx Holdings, LLC has sole voting and investment power with respect to the shares held by Lipoterx. The address for these entities is 25 E. Superior St., Chicago, Illinois 60611.

(3) Consists of (i) 767,187 shares held by InterWest Partnership, LP (“IW7”) and (ii) 36,738 shares held by InterWest Investors VII, LP (“II7”). InterWest Management Partners VII, LLC (“IMP7”), the general partner of IW7 and II7, has sole voting and investment power with respect to the shares held by IW7 and II7. Harvey B. Cash, Philip T. Gianos, W. Scott Hedrick, W. Stephen Holmes, Gilbert H. Kliman and Arnold L. Oronsky as the managing directors of IMP7 share voting and investment power with respect to the shares held by IW7 and II7. IMP7 has delegated shared voting and investment power with respect to the shares held by IW7 and II7 to Nina Kjellson, one of our former directors. The address for these entities is c/o InterWest Partners, 2710 Sand Hill Road, Suite 200, Menlo Park, California 94025.

(4) Consists of (i) 285,920 shares held by Fidelity Select Portfolios: Biotechnology Portfolio; (ii) 2,161 shares held by Fidelity Canadian Opportunities Fund; (iii) 173,073 shares held by Fidelity Canadian Growth Company Fund; and (iv) 170,085 shares by Fidelity Canadian Asset Allocation Fund. Fidelity Management & Research Company (“Fidelity”), 82 Devonshire Street, Boston, Massachusetts 02109, a wholly-owned subsidiary of FMR LLC and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, is the beneficial owner of 285,920 shares as a result of acting as investment adviser to various investment companies registered under Section 8 of the Investment Company Act of 1940. Edward C. Johnson 3d and FMR LLC, through its control of Fidelity, and the funds each has sole power to dispose of the 285,920 shares owned by the Funds. Members of the family of Edward C. Johnson 3d, Chairman of FMR LLC, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders’ voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders’ voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Edward C. Johnson 3d, Chairman of FMR LLC, has the sole power to vote or direct the voting of the shares owned directly by the Fidelity Funds, which power resides with the Funds’ Boards of Trustees. Fidelity carries out the voting of the shares under written guidelines established by the Funds’ Boards of Trustees. Pyramis Global Advisors Trust Company (“PGATC”), 900 Salem Street, Smithfield, Rhode Island, 02917, an indirect wholly-owned subsidiary of FMR LLC and a bank as defined in Section 3(a)(6) of the Securities Exchange Act of 1934, is the beneficial owner of 345,319 shares as a result of its serving as investment manager of institutional accounts owning such shares. Edward C. Johnson 3d and FMR LLC, through its control of PGATC, each has sole dispositive power over 345,319 shares and sole power to vote or to direct the voting of 1,678,276 shares owned by the institutional accounts managed by PGATC as reported above.

(5) Consists of (i) 192,307 shares held by Dr. Pimstone; (ii) 16,460 shares held by Dr. Pimstone’s spouse; and (iii) 183,552 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(6) Consists of 13,310 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(7) Consists of (i) 4,320 shares held by Dr. Goldberg and (ii) 67,087 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(8) Consists of (i) 48,583 shares held by Mr. Tarnow and (ii) 94,025 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(9) Consists of 46,441 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(10) Consists of 22,076 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(11) Consists of (i) 2,057 shares held by Ms. Corraini and (ii) 67,177 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(12) Consists of (i) 264,349 shares held by Chancellor V, L.P. (“Chancellor V”); (ii) 138,644 shares held by Chancellor V-A, L.P. (“Chancellor V-A”); and (iii) 41,662 shares held by Citiventure 2000, L.P. (“Citiventure”). Invesco Private Capital, Inc. is the managing member of IPC Direct Associates V, LLC, which is a Managing Director of each of Chancellor V, Chancellor V-A and Citiventure (collectively referred to as the “Invesco Capital Entities”). Mr. Evans is the Head of Invesco Private Capital, Inc. and a member of the investment committee of IPC Direct Associates V, LLC. Accordingly, Mr. Evans shares voting and investment power of the shares held by the Invesco Capital Entities. Mr. Evans disclaims beneficial ownership of these shares except with respect to his pecuniary interest therein.

(13) Consists of (i) 97,319 shares held by Dr. Hayden; (ii) 75,886 shares held by Dr. Hayden’s spouse; (iii) 49,440 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014 held by Dr. Hayden; and (iv) 102,141 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014 held by Genworks Inc.

(14) Consists of (i) 173,618 shares held by Mr. Holler and (ii) 106,004 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(15) Consists of 40,430 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(16) Consists of (i) 2,057 shares held by Dr. Sherrington and (ii) 61,518 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(17) Consists of (i) the shares listed in footnote (2) above, which are held by Lipoterx; (ii) 967 shares held by the Stein Family LLC for which Dr. Stein serves as the managing member; and (iii) 10,122 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(18) Consists of 43,277 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

(19) Consists of (i) 2,097,193 shares beneficially owned by our current executive officers and directors and (ii) 906,602 shares issuable upon exercise of options exercisable within 60 days of September 30, 2014.

DESCRIPTION OF SHARE CAPITAL

General

The following is a summary of the material rights of our common shares and new preferred shares, as contained in our articles and by-laws and any amendments thereto, that will be in effect upon completion of the offering. This summary is not a complete description of the share rights associated with our common shares and new preferred shares. For more detailed information, please see the forms of our articles and by-laws that will be in effect upon the closing of this offering, which are filed as exhibits to the registration statement of which this prospectus forms a part.

Upon or immediately prior to the closing of this offering:

- we will cause all of our outstanding Series A preferred shares and Series B preferred shares to convert into an aggregate of 2,146,353 common shares;
- we will cause all of our outstanding Series E preferred shares to convert into 5,579,571 common shares, based upon an assumed initial public offering price of $11.00 per share (the midpoint of the price range set forth on the cover page of this prospectus) and the adjustment provisions relating to our Series E preferred shares described below; and
- all of our outstanding subscription rights will automatically convert into an aggregate of 10,660 common shares.

Each Series E preferred share is convertible at any time at the option of the holder into common shares on a 1:1 basis, subject to certain adjustments. These adjustments differ for some of our outstanding Series E preferred shares depending on the date of issue, resulting in different conversion ratios for different Series E preferred shares. Pursuant to the terms of an amendment to our articles of continuance that we intend to file prior to the closing of this offering, which was approved by our shareholders in June 2014, immediately prior to the closing of this offering, the conversion rights associated with each of our Series E preferred shares will increase by 20% if the initial public offering price is below $16.55 per common share. If the initial public offering price is at or above $16.55 per common share, the conversion rights associated with each of our Series E preferred shares will remain, as described above, on a 1:1 basis, subject to certain adjustments. As a result of this offering and based upon an assumed initial public offering price of $11.00 per common share (the midpoint of the price range set forth on the cover page of this prospectus) all of our outstanding Series E preferred shares will convert into 5,579,571 common shares immediately prior to the closing of this offering. If the initial public offering price is at or above $16.55 per common share, all of our outstanding Series E preferred shares will convert into 4,469,683 common shares immediately prior to the closing of this offering.

Share Capital

Outstanding Shares

As a result, upon closing of this offering and the concurrent private placement, based on the common shares, preferred shares and subscription rights outstanding as of June 30, 2014, our authorized share capital will consist of an unlimited number of common shares, each without par value, of which 13,539,232 will be issued and outstanding, and an unlimited number of new preferred shares, issuable in series, each without par value, none of which will be issued and outstanding.

As of June 30, 2014, we had 1,442,741 common shares issuable pursuant to outstanding options, and we had approximately 337 holders of record of our common shares.

Voting Rights

Under our amended articles that will be in effect upon the closing of this offering, the holders of our common shares will be entitled to one vote for each common share held on all matters submitted to a vote of the shareholders, including the election of directors. Our articles and by-laws to be in effect upon the completion of this offering do not provide for cumulative voting rights. Because of this, the holders of a plurality of the common shares entitled to vote in any election of directors can elect all of the directors standing for election, if they should so choose.

Dividends

Subject to priority rights that may be applicable to any then outstanding new preferred shares, holders of our common shares are entitled to receive dividends, as and when declared by our board of directors in their absolute discretion out of legally available funds. For more information, see the section titled “Dividend Policy.”

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common shares will be entitled to share ratably in the net assets legally available for distribution to shareholders after the payment of all of our debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding new preferred shares.

Rights and Preferences

Our common shares contain no pre-emptive or conversion rights and have no provisions for redemption or repurchase for cancellation, surrender or sinking or purchase funds. There are no provisions in our articles or by-laws requiring holders of common shares to contribute additional capital. The rights, preferences and privileges of the holders of our common shares are subject to and may be adversely affected by, the rights of the holders of any series of new preferred shares that our board of directors may designate and we may issue in the future.

Fully Paid and Nonassessable

All of our outstanding common shares are, and the common shares to be issued pursuant to this offering, when paid for, will be fully paid and nonassessable.

New Preferred Shares

Upon or immediately prior to the closing of this offering, our articles will be amended to delete all references to our Series A preferred shares, Series B preferred shares, Series C preferred shares, Series D preferred shares and Series E preferred shares. Under our amended articles that will be in effect upon the closing of this offering, our board of directors will have the authority to issue, without further action by our shareholders, an unlimited number of new preferred shares, issuable in one or more series, and subject to the provisions of the Canada Business Corporations Act, or CBCA, and to fix such rights, preferences, privileges, restrictions and conditions thereon, including dividend and voting rights, as our board of directors may determine, and such rights, preferences and privileges, including dividend, voting rights and rights relating to the distribution of our assets in the event of liquidation, dissolution or winding up of our affairs, whether, voluntary or involuntary, or any other distribution of our assets among our shareholders for the purpose of winding up our affairs, may be superior to those of our common shares. The issuance of new preferred shares, while providing flexibility in connection with possible acquisitions and other corporate purposes, could adversely affect the voting power of holders of common shares and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of new preferred shares could, among other things, have the effect of delaying, deferring or preventing a change in control of our company or other corporate action and could adversely affect the market price of our common shares and the voting and other rights of the holders of our common shares.

Upon closing of this offering, no new preferred shares will be outstanding, and we have no present plan to issue any new preferred shares.

Subscription Rights

We entered into a research funding agreement with Genome BC, which provides Genome BC with certain subscription rights upon certain funding payments. As of June 30, 2014, 10,660 common shares were issuable pursuant to these subscription rights, which rights will automatically convert into common shares immediately prior to the closing of this offering for no additional consideration.

Registration Rights

Under our amended and restated investor rights agreement, as amended, the holders of approximately 6,334,582 common shares as of September 30, 2014, or their transferees, have the right to require us to register the offer and sale of their common shares, or to include their common shares in any registration statement we file, in each case as described below. In connection with the current offering, all of our shareholders with registration rights

have agreed not to sell or otherwise dispose of any securities without the prior written consent of the representatives of underwriters for a period of 180 days after the date of this prospectus, subject to certain terms and conditions. For more information regarding such terms and conditions, see “Shares Eligible for Future Sale—Lock-Up and Market Stand-off Agreements” and “Underwriting.”

Demand Registration Rights

The holders of a majority of the shares having registration rights have the right to demand that we file a registration statement for the offer and sale of at least such number of common shares, or a lesser amount if the anticipated offering proceeds would exceed CAD$5,000,000, or $4,686,000, as converted, subject to specified limitations. We are only obligated to effect two registrations in connection with the exercise of demand registration rights. These registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of common shares included in any such registration under certain circumstances and our ability to defer the filing of a registration statement with respect to an exercise of such demand registration rights for up to 90 days under certain circumstances.

Form S-3 Registration Rights

At any time after we are qualified to file a registration statement on Form S-3, each holder of shares having registration rights has the right to demand that we file a registration statement on Form S-3 so long as the aggregate amount of shares to be offered and sold under such registration statement on Form S-3 is at least CAD$500,000, or $468,600 as converted. We are not obligated to file any registration statements within 180 days following the effective date of a registration pertaining to a public offering or to effect more than two registrations on Form S-3 in any 12-month period. These registration rights are subject to specified conditions and limitations, including our ability to defer the filing of a registration statement with respect to an exercise of such Form S-3 registration rights for up to 90 days under certain circumstances.

Piggyback Registration Rights

If we propose to register the offer and sale of any of our securities under the Securities Act either for our own account or for the account of other shareholders, a shareholder with registration rights will have the right, subject to certain exceptions, to include their common shares in the registration statement. These registration rights are subject to specified conditions and limitations, including the right of the underwriters to limit the number of common shares included in any such registration statement under certain circumstances, but not below 25% of the total number of common shares covered by the registration statement.

Expenses of Registration

We will pay all expenses relating to any demand registrations, Form S-3 registrations and piggyback registrations, other than underwriting discounts and selling commissions.

Termination

The registration rights terminate upon the earliest of (1) the date that is four years after the closing of this offering and (2) as to a given holder of registration rights, if (a) we have completed our initial public offering and are subject to the public company reporting requirements of the Securities Exchange Act of 1934, (b) such holder holds less than 1% of our outstanding common shares and (c) such holder can sell all of such holder’s registrable securities in a three month-period pursuant to Rule 144 promulgated under the Securities Act.

Right of First Refusal

Under our amended and restated investors rights agreement, as amended, certain holders of our redeemable convertible preferred shares have rights of first refusal to purchase their pro rata share of equity securities that we may issue from time to time, with certain exceptions. Such rights of first refusal do not apply to the shares to be issued in this offering. On the effective date of a registration statement for an initial public offering completed on or before December 31, 2014 that results in our common shares being quoted on NASDAQ, these rights of first refusal will terminate.

Corporate Governance

Under the CBCA, we are required to hold a general meeting of our shareholders at least once every year at a time and place determined by our board of directors, provided that the meeting must not be held later than 15 months after the preceding annual general meeting and no later than six months after the end of the preceding financial year. The CBCA requires that meetings of shareholders shall be held at any place within Canada as our board of directors may

from time to time determine. A notice to convene a meeting, specifying the date, time and location of the meeting must be sent to shareholders, to each director and the auditor not less than 21 days prior to the meeting or such other minimum period as required by the applicable securities laws. Under the CBCA, shareholders entitled to notice of a meeting may waive or reduce the period of notice for that meeting, provided applicable securities laws requirements are met.

Under the CBCA, all business transacted at a special meeting of shareholders and all business transacted at an annual meeting of shareholders, except consideration of the financial statements, auditor's report, election of directors and re-appointment of the incumbent auditor, is deemed to be special business. Notice of a meeting of shareholders at which special business is to be transacted shall state (a) the nature of that business in sufficient detail to permit the shareholder to form a reasoned judgment thereon; and (b) the text of any special resolution to be submitted to the meeting.

Under the CBCA, our board of directors has the power at any time to call a special meeting of our shareholders. In addition, the holders of not less than 5% of our shares that carry the right to vote at a meeting sought to be held can also requisition our board of directors to call a meeting of our shareholders for the purposes stated in the requisition. If our board of directors does not call the meeting within 21 days after receiving the requisition, our shareholders can call the meeting and the expenses reasonably incurred by such shareholders in requisitioning, calling and holding the meeting must be reimbursed by us.

Those entitled to vote at a meeting are entitled to attend meetings of our shareholders. Every shareholder entitled to vote may appoint a proxyholder to attend the meeting in the manner and to the extent authorized and with the authority conferred by the proxy. Directors, auditors, legal counsels, secretary (if any), and any other persons invited by the chair of the meeting or with the consent of those at the meeting are entitled to attend any meeting of our shareholders but will not be counted in quorum or be entitled to vote at the meeting unless he or she or it is a shareholder or proxyholder entitled to vote at the meeting.

Certain Takeover Bid Requirements

Unless such offer constitutes an exempt transaction, an offer made by a person, an "offeror", to acquire outstanding shares of a Canadian entity that, when aggregated with the offeror's holdings (and those of persons or companies acting jointly with the offeror), would constitute 20% or more of the outstanding shares in a class, would be subject to the take-over provisions of Canadian securities laws. The foregoing is a limited and general summary of certain aspects of applicable securities law in the provinces and territories of Canada, all in effect as of the date hereof.

In addition to those takeover bid requirements noted above, the acquisition of our shares may trigger the application of statutory regimes including among others, the Investment Canada Act (Canada) and the Competition Act (Canada).

Limitations on the ability to acquire and hold our common shares may be imposed by the Competition Act (Canada). This legislation permits the Commissioner of Competition, or the Commissioner, to review any acquisition of control over or of a significant interest in us. This legislation grants the Commissioner jurisdiction, for up to one year, to challenge this type of acquisition before the Canadian Competition Tribunal on the basis that it would, or would be likely to, substantially prevent or lessen competition in any market in Canada.

This legislation also requires any person who intends to acquire our common shares to file a notification with the Canadian Competition Bureau if certain financial thresholds are exceeded and if that person (and their affiliates) would hold more than 20% of our common shares. If a person already owns 20% or more of our common shares, a notification must be filed when the acquisition of additional shares would bring that person's holdings to over 50%. Where a notification is required, the legislation prohibits completion of the acquisition until the expiration of a statutory waiting period, unless the Commissioner provides written notice that she does not intend to challenge the acquisition.

There is no limitation imposed by Canadian law or our articles on the right of non-residents to hold or vote our common shares, other than those imposed by the Investment Canada Act.

The Investment Canada Act requires any person that is a "non-Canadian" (as defined in the Investment Canada Act) who acquires control of an existing Canadian business, where the acquisition of control is not a reviewable

transaction, to file a notification with Industry Canada. The Investment Canada Act generally prohibits the implementation of a reviewable transaction unless, after review, the relevant minister is satisfied that the investment is likely to be of net benefit to Canada. Under the Investment Canada Act, the acquisition of control of us (either through the acquisition of our common shares or all or substantially all our assets) by a non-Canadian who is a World Trade Organization member country investor, including a U.S. investor, would be reviewable only if the value of our assets was equal to or greater than a specified amount. The specified amount for 2014 is CAD$354.0 million. The threshold amount is subject to an annual adjustment on the basis of a prescribed formula in the Investment Canada Act to reflect changes in Canadian gross domestic product.

As a result of recent amendments to the Investment Canada Act substantial changes to the review threshold are pending. If and when these amendments come into force, the review threshold will increase to CAD$600.0 million (and eventually to CAD$1.0 billion) and will no longer be calculated on the basis of the book value of the Canadian business assets, but rather its “enterprise value”.

The acquisition of a majority of the voting interests of an entity is deemed to be acquisition of control of that entity. The acquisition of less than a majority but one-third or more of the voting shares of a corporation or an equivalent undivided ownership interest in the voting shares of a corporation is presumed to be an acquisition of control of that corporation unless it can be established that, on the acquisition, the corporation is not controlled in fact by the acquirer through the ownership of voting shares. The acquisition of less than one-third of the voting shares of a corporation is deemed not to be an acquisition of control of that corporation. Certain transactions in relation to our common shares would be exempt from review by the Investment Canada Act including:

- the acquisition of our common shares by a person in the ordinary course of that person’s business as a trader or dealer in securities;
- the acquisition of control of us in connection with the realization of security granted for a loan or other financial assistance and not for any purpose related to the provisions of the Investment Canada Act; and
- the acquisition of control of us by reason of an amalgamation, merger, consolidation or corporate reorganization following which ultimate direct or indirect control in fact of us, through the ownership of our voting shares, remains unchanged.

Under the new national security regime in the Investment Canada Act, review on a discretionary basis may also be undertaken by the federal government in respect of a much broader range of investments by a non-Canadian to “acquire, in whole or in part, or to establish an entity carrying on all or any part of its operations in Canada.” The relevant test is whether such an investment by a non-Canadian could be “injurious to national security.” The Minister of Industry has broad discretion to determine whether an investor is a non-Canadian and may be subject to national security review. Review on national security grounds is at the discretion of the federal government and may occur on a pre- or post-closing basis.

There is no law, governmental decree or regulation in Canada that restricts the export or import of capital or which would affect the remittance of dividends or other payments by us to non-Canadian holders of our common shares or preferred shares, other than withholding tax requirements.

Neither our articles to be in effect upon the completion of this offering nor by-laws to be in effect upon the completion of this offering contain any change of control limitations with respect to a merger, acquisition or corporate restructuring that involves us.

This summary is not a comprehensive description of relevant or applicable considerations regarding such requirements and, accordingly, is not intended to be, and should not be interpreted as, legal advice to any prospective purchaser and no representation with respect to such requirements to any prospective purchaser is made. Prospective investors should consult their own Canadian legal advisors with respect to any questions regarding securities law in the provinces and territories of Canada.

Actions Requiring a Special Majority

Under the CBCA, certain corporate actions require the approval of a special majority of shareholders, meaning holders of shares representing not less than 66 $^{2}/_{3}$% of those votes cast in respect of a shareholder vote addressing such matter. Those items requiring the approval of a special majority generally relate to fundamental changes with

respect to our business, and include among others, resolutions: (i) amending our articles; (ii) approving an amalgamation; (iii) approving a continuance; and (iv) providing for a sale, lease or exchange of all or substantially all of our property.

Advance Notice Procedures and Shareholder Proposals

Under the CBCA, shareholders may make proposals for matters to be considered at the annual general meeting of shareholders. Such proposals must be sent to us in advance of any proposed meeting by delivering a timely written notice in proper form to our registered office in accordance with the requirements of the CBCA. The notice must include information on the business the shareholder intends to bring before the meeting.

In addition, our amended by-laws that will be in effect upon the closing of this offering, require that shareholders provide us with advance notice of their intention to nominate any persons, other than those nominated by management, for election to our board of directors at a meeting of shareholders.

These provisions could have the effect of delaying until the next shareholder meeting the nomination of certain persons for director that are favored by the holders of a majority of our outstanding voting securities.

Ownership and Exchange Controls

There is currently no law, governmental decree or regulation in Canada that restricts the export or import of capital, or which would affect the remittance of dividends, interest or other payments by us to non-resident holders of our common shares, other than withholding tax requirements, as discussed below under “United States and Canadian Income Tax Considerations—Certain Canadian Federal Income Tax Information.”

There is currently no limitation imposed by Canadian law or our amended articles or by-laws on the right of non-residents to hold or vote our common shares, other than those imposed by the Investment Canada Act and the Competition Act (Canada). These acts will generally not apply except where a control of an existing Canadian business or company, which has Canadian assets or revenue over a certain threshold, is acquired and will not apply to trading generally of securities listed on a stock exchange.

Listing

We have applied to list our common shares on The NASDAQ Global Market under the symbol “XENE.”

Transfer Agent and Registrar

The transfer agent and registrar for our common shares is American Stock Transfer & Trust Company, LLC. The transfer agent and registrar’s address is 6201 15th Avenue, Brooklyn, New York 11219, and its telephone number is (718) 921-8206. Additionally, in compliance with the CBCA, we have retained CST Trust Company, an affiliate of American Stock Transfer & Trust Company, LLC, to act as our Canadian transfer agent and registrar. CST Trust Company’s address is 1066 West Hastings Street, Vancouver, BC V6E 3X1, and its telephone number is (604) 235-3703.

MATERIAL DIFFERENCES BETWEEN THE CANADA BUSINESS CORPORATIONS ACT AND THE DELAWARE GENERAL CORPORATION LAW

Our corporate affairs are governed by our articles and by-laws and the provisions of the Canada Business Corporations Act, or CBCA. The CBCA differs from the various state laws applicable to U.S. corporations and their shareholders. The following table provides a summary of the material differences between the provisions of the CBCA and the Delaware General Corporation Law, or DGCL, taking into account certain specific provisions in our amended articles and our by-laws that will be in effect upon the closing of this offering.

	CBCA	DGCL
Authorized share capital	Upon closing, under our amended articles, as permitted by the CBCA, the authorized share capital will consist of (i) an unlimited number of common shares without par value and (ii) an unlimited number of new preferred shares without par value, issuable in series. Upon closing, under our amended articles, our board of directors will have the authority to issue new preferred shares in one or more series, with such designations and special rights and restrictions as our board of directors may determine.	Under the DGCL, a corporation's certificate of incorporation must specify the number of shares of each class of stock and their par value, or include a statement that such shares are without par value. The certificate of incorporation must also set forth the designations, powers, preferences, rights, qualifications, limitations and restrictions of each class of shares, if any. Under the DGCL, a corporation's certificate of incorporation may give the board of directors the authority to issue preferred stock in one or more series, with such designations and special rights and restrictions as determined by the board of directors.
Dividends	Under the CBCA and our amended articles, dividends may be declared on the common shares at the discretion of our board of directors. Any dividends declared shall be subject to the rights, if any, of shareholders holding shares with special rights as to dividends. Our directors may declare dividends unless there are reasonable grounds for believing that we are insolvent or the payment of such dividends would render us insolvent.	The DGCL generally provides that, subject to certain restrictions, the directors of a corporation may declare and pay dividends upon the shares of its capital stock either out of the corporation's surplus or, if there is no such surplus, out of its net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year. Further, the holders of preferred or special stock of any class or series may be entitled to receive dividends at such rates, on such conditions and at such times as stated in the certificate of incorporation.
Vote Required for Certain Transactions	Under the CBCA, certain extraordinary corporate actions, including, without limitation, continuances, certain amalgamations and sales, leases or exchanges of all, or substantially all, of the property of a corporation (other than in the ordinary course of business), and liquidations, dissolutions and certain arrangements, are required to be approved by special resolution of our shareholders. A special resolution is a resolution passed by not less than two-thirds of the votes cast by the shareholders who voted in respect of the resolution or signed by all shareholders entitled to vote on the resolution.	Under the DGCL, certain mergers, consolidation, sale, lease, exchange or other disposition of all, or substantially all, the property and assets of a corporation or dissolution of the corporation requires the approval of a majority of the outstanding voting stock of the corporation entitled to vote thereon.

Amendment of Organizing Documents	Under the CBCA, an amendment to our articles generally requires approval by special resolution of holders of our voting shares. Specified amendments may also require the approval of other classes of our shares. In the event that an amendment to our articles would prejudice or interfere with a right or special right attached to our issued shares of a class or series of our shares, such amendment must be approved separately by the holders of the class or series of shares being affected.	The DGCL provides that a corporation may amend its certificate of incorporation if its board of directors has adopted such amendment, followed by the affirmative vote of a majority of the outstanding voting stock and a majority of the outstanding shares of each class entitled to vote on the amendment as a class. In the event the amendment would alter the aggregate number of authorized shares of a class of stock, their par value, or the powers, preferences or special rights of the shares of a class so as to affect them adversely, the holders of the outstanding shares of the class are entitled to vote as a class upon a proposed amendment, whether or not entitled to vote thereon by the certificate of incorporation.
Amendment of By-laws	Under the CBCA, our board of directors may, by resolution, make, amend or repeal any by-law that regulates our business or affairs. Where our board of directors makes, amends or repeals a by-law, they are required under the CBCA to submit that action to our shareholders at the next meeting of shareholders and our shareholders may confirm, reject or amend that action by ordinary resolution. If the action is rejected by our shareholders, or our board of directors does not submit the action to our shareholders at the next meeting of shareholders, the action will cease to be effective and no subsequent resolution of our directors to make, amend or repeal a by-law having substantially the same purpose or effect will be effective until it is confirmed.	The DGCL provides that the stockholders entitled to vote have the power to adopt, amend or repeal bylaws. A corporation may also confer, in its certificate of incorporation, that power upon the board of directors.
Quorum of Shareholders	As permitted under the CBCA, our by-laws provide that quorum for meetings of shareholders is one person present or representing by proxy, shareholders holding no less than 33 1/3% of the issued shares entitled to be voted at the meeting.	Under the DGCL, unless otherwise provided in the certificate of incorporation, with respect to any matter, a quorum for a meeting of stockholders requires the holders of a majority of the shares entitled to vote are represented at the meeting in person or by proxy.
Annual Meetings of Shareholders	Under the CBCA, we must hold an annual general meeting of our shareholders at least once every year at a time and place determined by our board of directors, provided that the meeting must not be held later than 15 months after the preceding annual general meeting but no later than six months after the end of our preceding financial year. The CBCA requires that a meeting of our shareholders may be held anywhere in Canada as our board of directors may determine. Under the CBCA, and our by-laws, we must provide notice of an annual general meeting to each shareholder entitled to vote thereat, to each director, and to our auditor at least 21 days in advance of the meeting.	Under the DGCL, a corporation must hold an annual meeting of stockholders in a place designated by the certificate of incorporation or bylaws, whether inside or outside of Delaware, or, if not so designated, as determined by the board of directors and on a date and at a time designated in the bylaws, except as otherwise provided by law. Written notice of every meeting of stockholders must be given to each stockholder of record not less than ten and not more than 60 days before the date of the meeting.

Special Meetings of Shareholders	Under the CBCA and our by-laws, our board of directors has the power at any time to call a special meeting of shareholders. Under the CBCA, the holders of not less than 5% of our issued shares that carry the right to vote at a meeting sought to be held can also requisition our directors to call a meeting of shareholders for the purposes stated in the requisition.	Under the DGCL, special meetings of stockholders may be called by the board of directors or by such person or persons as may be authorized by the certificate of incorporation or the bylaws.
Anti-takeover Provisions and Interested Shareholder Transactions	As permitted by the CBCA, our amended articles provide that our board of directors may fix the number of preferred shares in, and determine the designation of the shares of, each series and create, define and attach rights and restrictions to the preferred shares without shareholder approval. Neither the CBCA nor our amended articles restrict us from adopting a shareholder rights plan. The CBCA does not restrict related party transactions; however, in Canada takeovers and other related party transactions are addressed in provincial securities legislation and policies which may apply to us.	Under the DGCL, a certificate of incorporation may provide the board of directors with the ability to designate the terms of and issue a new class or series of preferred stock, and to issue a stockholder rights plan. Delaware corporations are subject to Delaware's "business combination" statute. In general, such statute prohibits a corporation from engaging in any business combination transactions with an interested stockholder for a period of three years after the time that the stockholder became an interested stockholder, unless approved by the board of directors beforehand or upon satisfaction of other criteria.
Interested Director Transactions	Under the CBCA, a director who holds a disclosable interest in a material contract or transaction into which we have entered or propose to enter may generally not vote on any directors' resolution to approve the contract or transaction. A director or officer has a disclosable interest in a material contract or transaction if the director or officer is: n a party to the contract or transaction; n is a director or officer, or an individual acting in a similar capacity, of a party to the contract or transaction; or n has a material interest in a party to the contract or transaction. Under the CBCA, directors do not have to abstain from voting on matters related to director compensation.	Under the DGCL, a transaction in which a director of the corporation has a conflict of interest is not void or voidable solely because of the director's conflict, solely because the director is present at or participates in the meeting of the board of directors or committee which authorizes the transaction or solely because any such director's vote is counted for such purpose, if (a) the material facts of the conflict of interest are known to or disclosed to the board of directors or the committee and the board of directors or committee in good faith authorizes the transaction by a majority of the votes of the disinterested directors, (b) the material facts of the conflict of interest are known or disclosed to the stockholders of the corporation and the transaction is approved in good faith by the stockholders, or (c) the board of directors can demonstrate that the transaction is fair as to the corporation as of the time it is approved by the board of directors, committee or stockholders.
Directors' and Officers'; Liability and Indemnification	As permitted under the CBCA, our by-laws, subject to certain limitations, require us to indemnify our directors and officers and our former directors and officers and any persons acting, at our request, as a director or officer, or in a similar capacity, of a body corporate.	Under the DGCL, a corporation has the power to indemnify any person who was, is or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, or any person who was, is or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to

		procure a judgment in its favor, in each case by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, against expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interest of the corporation, and subject to certain other limitations.
Dissent or Dissenters' Appraisal Rights	Under the CBCA dissenters' rights are generally only available in connection with: n any amalgamation with another corporation (other than with certain affiliated corporations); n an amendment to our articles to add, change or remove any provisions restricting or constraining the issue or transfer of shares of the class in respect of which a shareholder is dissenting; n an amendment to our articles to add, change or remove any restriction upon the business or businesses that we may carry on; n a continuance under the laws of another jurisdiction; n a sale, lease or exchange of all, or substantially all, of our property other than in the ordinary course of business; n the carrying out of a going-private or a squeeze-out transaction; n a court order permitting a shareholder to dissent in connection with an application to the court for an order approving an arrangement proposed by us; and n certain amendments to our articles which require a separate class or series vote by a holder of shares of any class or series.	Under the DGCL, dissenters' rights are generally only available in connection with cash mergers or mergers where the target stockholders hold stock other than stock of a widely held corporation.
Oppression Remedy	The CBCA provides an oppression remedy that enables a court to make any order, whether interim or final, to rectify matters that are oppressive or unfairly prejudicial to or that unfairly disregard the interests of any of our securityholders, creditors, directors or officers if an application is made to a court by a "complainant".	The DGCL does not expressly provide for a similar remedy.

	A "complainant" with respect to a corporation means any of the following: n a present or former registered holder or beneficial owner of securities of the corporation or any of its affiliates; n a present or former officer or director of the corporation or any of its affiliates; n the director responsible for the application of the CBCA; and n any other person who in the discretion of the court is a proper person to make the application. The oppression remedy provides the court with very broad and flexible powers to intervene in corporate affairs to protect our shareholders and other complainants. While conduct that is in breach of fiduciary duties of directors or that is contrary to the legal right of a complainant will normally trigger the court's jurisdiction under the oppression remedy, the exercise of that jurisdiction does not depend on a finding of a breach of those legal and equitable rights.	
Shareholder Derivative Actions	Under the CBCA, a complainant may also apply to a Canadian court for leave to bring an action in the name of, and on behalf of us, or to intervene in an existing action to which we are a party, for the purpose of prosecuting, defending or discontinuing an action on our behalf. Under the CBCA, no action may be brought and no intervention in an action may be made unless a court is satisfied that: n the complainant has given the required notice to our board of directors of the shareholder's intention to apply to the court if our board of directors does not bring, diligently prosecute or defend or discontinue the action; n the complainant is acting in good faith; and n it appears to be in our interests or the interest of the relevant subsidiary that the action be brought, prosecuted, defended or discontinued. Under the CBCA, the court in a derivative action may make any order it thinks fit.	Under the DGCL, stockholders may bring derivative actions on behalf of, and for the benefit of, the corporation. The plaintiff in a derivative action on behalf of the corporation either must be or have been a stockholder of the corporation at the time of the transaction or must be a stockholder who became a stockholder by operation of law.

Director Qualification	Generally, at least 25% of the directors of a CBCA corporation must be resident Canadians. Furthermore, under the CBCA, no business may be transacted at a meeting of our board of directors unless 25% of the directors present, or able to provide approval of the business transacted at the meeting in writing, by telephone or other means of communication, are resident Canadians.	The DGCL does not have director residency requirements although a corporation may prescribe qualifications for directors under its certificate of incorporation or bylaws.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common shares, and although we expect that our common shares will be approved for listing on The NASDAQ Global Market, we cannot assure investors that there will be an active public market for our common shares following this offering. We cannot predict what effect, if any, sales of our shares in the public market or the availability of shares for sale will have on the market price of our common shares. Future sales of substantial amounts of common shares in the public market, including shares issued upon exercise of outstanding options, or the perception that such sales may occur, however, could adversely affect the market price of our common shares and also could adversely affect our future ability to raise capital through the sale of our common shares or other equity-related securities of ours at times and prices we believe appropriate.

Upon completion of this offering and the concurrent private placement, based on our shares outstanding as of September 30, 2014 and after giving effect to the conversion of all outstanding convertible preferred shares and the conversion of all subscription rights, 13,540,261 of our common shares will be outstanding, or 14,140,261 common shares if the underwriters exercise their option to purchase additional common shares in full. All of the common shares expected to be sold in this offering, including the common shares sold to Teva or its affiliate, will be freely tradable without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act, unless held by our "affiliates," as that term is defined in Rule 144 under the Securities Act. The remaining 9,085,716 outstanding common shares will be deemed "restricted securities" as that term is defined under Rule 144. Restricted securities may be sold in the public market only if their offer and sale is registered under the Securities Act or if the offer and sale of those securities qualify for an exemption from registration, including exemptions provided by Rules 144 and 701 under the Securities Act, which are summarized below.

As a result of the lock-up agreements and market stand-off provisions described below and the provisions of Rules 144 or 701 and no exercise of the underwriters' option to purchase additional common shares, the common shares that will be deemed "restricted securities" will be available for sale in the public market following the completion of this offering as follows:

- 318,170 shares will be eligible for sale on the date of this prospectus; and
- 8,767,546 shares will be eligible for sale upon expiration of the lock-up agreements and market stand-off provisions described below, beginning more than 180 days after the date of this prospectus.

We may issue common shares from time to time for a variety of corporate purposes, including in capital-raising activities through future public offerings or private placements, in connection with exercise of stock options, vesting of restricted stock units and other issuances relating to our employee benefit plans and as consideration for future acquisitions, investments or other purposes. The number of common shares that we may issue may be significant, depending on the events surrounding such issuances. In some cases, the shares we issue may be freely tradable without restriction or further registration under the Securities Act; in other cases, we may grant registration rights covering the shares issued in connection with these issuances, in which case the holders of the common shares will have the right, under certain circumstances, to cause us to register any resale of such shares to the public.

Lock-Up and Market Standoff Agreements

We, our directors and officers and substantially all of the holders of our equity securities have agreed, subject to certain exceptions, not to offer, sell or transfer any of our common shares or securities convertible into or exchangeable or exercisable for our common shares, for 180 days after the date of this prospectus without first obtaining the written consent of Jefferies LLC and Wells Fargo Securities, LLC on behalf of the underwriters, after the date of this prospectus. These agreements are described in the section of this prospectus captioned "Underwriting."

Jefferies LLC and Wells Fargo Securities, LLC have advised us that they have no present intent or arrangement to release any common shares subject to a lock-up, and will consider the release of any lock-up on a case-by-case basis. There are no existing agreements between the underwriters and any of our shareholders who have or will execute a lock-up agreement, providing consent to the sale of common shares prior to the expiration of the lock-up period.

Following the lock-up periods set forth in the agreements described above, and assuming that the representatives of the underwriters do not release any parties from these agreements and that there is no extension of the lock-up period, all of the common shares that are restricted securities or are held by our affiliates as of the date of this prospectus will be eligible for sale in the public market in compliance with Rule 144 under the Securities Act.

In addition to the restrictions contained in the lock-up agreements described above, our amended and restated investor rights agreement, as amended, contains market stand-off provisions imposing restrictions on the ability of certain of our security holders to offer, sell or transfer our equity securities for a period of 180 days following the effective date of this registration statement.

Rule 144

In general, under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, for at least 90 days, a person (or persons whose common shares are required to be aggregated) who is not deemed to have been one of our "affiliates" for purposes of Rule 144 at any time during the three months preceding a sale, and who has beneficially owned restricted securities within the meaning of Rule 144 for at least six months, including the holding period of any prior owner other than one of our "affiliates," is entitled to sell those shares in the public market (subject to the lock-up agreement referred to above, if applicable) without complying with the manner of sale, volume limitations or notice provisions of Rule 144, but subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than "affiliates," then such person is entitled to sell such shares in the public market without complying with any of the requirements of Rule 144 (subject to the lock-up agreement referred to above, if applicable). In general, under Rule 144, as currently in effect, once we have been subject to the public company reporting requirements of the Exchange Act for at least 90 days, our "affiliates," as defined in Rule 144, who have beneficially owned the common shares proposed to be sold for at least six months are entitled to sell in the public market, upon expiration of any applicable lock-up agreements and within any three-month period, a number of those common shares that does not exceed the greater of:

- 1% of the number of common shares then outstanding, which will equal approximately 135,392 common shares immediately after this offering (calculated on the basis of the assumptions described above and assuming no exercise of the underwriter's option to purchase additional shares and no exercise of outstanding options or warrants); or
- the average weekly trading volume of our common shares on The NASDAQ Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Such sales under Rule 144 by our "affiliates" or persons selling shares on behalf of our "affiliates" are also subject to certain manner of sale provisions, notice requirements and to the availability of current public information about us. Notwithstanding the availability of Rule 144, the holders of substantially all of our restricted securities have entered into lock-up agreements as referenced above and their restricted securities will become eligible for sale (subject to the above limitations under Rule 144) upon the expiration of the restrictions set forth in those agreements.

Rule 701

In general, under Rule 701 as currently in effect, any of our employees, directors, officers, consultants or advisors who acquired common shares from us in connection with a written compensatory stock or option plan or other written agreement in compliance with Rule 701 under the Securities Act before the effective date of the registration statement of which this prospectus is a part (to the extent such common shares are not subject to a lock-up agreement) is entitled to rely on Rule 701 to resell such common shares beginning 90 days after we become subject to the public company reporting requirements of the Exchange Act in reliance on Rule 144, but without compliance with the holding period requirements contained in Rule 144. Accordingly, subject to any applicable lock-up agreements, beginning 90 days after we become subject to the public company reporting requirements of the Exchange Act, under Rule 701 persons who are not our "affiliates," as defined in Rule 144, may resell those common shares without complying with the minimum holding period or public information requirements of

Rule 144, and persons who are our “affiliates” may resell those common shares without compliance with Rule 144’s minimum holding period requirements (subject to the terms of the lock-up agreement referred to above, if applicable).

Equity Incentive Plans

We intend to file with the SEC a registration statement under the Securities Act covering the common shares that we may issue upon exercise of outstanding options under our Amended and Restated Stock Plan and the common shares that we may issue pursuant to future awards under our 2014 Equity Incentive Plan. Such registration statement is expected to be filed and become effective as soon as practicable after the completion of this offering. Accordingly, common shares registered under such registration statement will be available for sale in the open market following its effective date, subject to Rule 144 volume limitations and the lock-up agreements described above, if applicable.

Registration Rights

Upon completion of this offering, the holders of approximately 6,334,582 of our common shares, based on our common shares outstanding as of September 30, 2014, will be eligible to exercise certain rights to cause us to register their common shares for resale under the Securities Act, subject to various conditions and limitations. These registration rights are described under the caption “Description of Share Capital— Registration Rights.” Upon the effectiveness of a registration statement covering these common shares, the common shares would become freely tradable, and a large number of common shares may be sold into the public market. If that occurs, the market price of our common shares could be adversely affected.

UNITED STATES AND CANADIAN INCOME TAX CONSIDERATIONS

U.S. Federal Income Tax Information for U.S. Holders

The following summary describes the material U.S. federal income tax consequences of the ownership and disposition of common shares purchased in this offering. The discussion set forth below is applicable to U.S. Holders (as defined below). This summary deals only with common shares held as capital assets, meaning generally, assets held for investment.

The term “U.S. Holder” means a beneficial owner of a common share that is, for U.S. federal income tax purposes:

- an individual citizen or resident of the U.S.;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the U.S., any state thereof or the District of Columbia;
- an estate, the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust if it (a) is subject to the primary supervision of a court within the U.S. and one or more U.S. persons have the authority to control all substantial decisions of the trust or (b) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

This summary does not describe all of the U.S. federal income tax consequences applicable to a U.S. Holder if such U.S. Holder is subject to special treatment under U.S. federal income tax laws, including if such U.S. Holder is:

- a dealer in securities or currencies;
- a financial institution;
- a regulated investment company;
- a real estate investment trust;
- an insurance company;
- a tax-exempt organization;
- a person holding our common shares as part of a hedging, integrated or conversion transaction, a constructive sale or a straddle;
- a trader in securities that has elected the mark-to-market method of accounting for its securities;
- a person liable for alternative minimum tax;
- a person who owns, directly, indirectly or constructively, or is deemed to own 10% or more of our voting common shares;
- a partnership or other pass-through entity for U.S. federal income tax purposes; or
- a person whose “functional currency” is not the U.S. dollar.

If a partnership holds our common shares, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. Partners of a partnership holding our common shares should consult their own tax advisors.

The discussion below is based upon the provisions of the U.S. Internal Revenue Code of 1986, as amended, or the Code, and regulations, including proposed regulations, Internal Revenue Service, or the IRS, rulings and judicial decisions thereunder as of the date hereof. These authorities may be replaced, revoked or modified so as to result in U.S. federal income tax consequences different from those discussed below. This discussion does not contain a detailed description of all U.S. federal income tax consequences applicable to a U.S. Holder in light of such U.S. Holder’s particular circumstances and does not address the effects of any state, local or non-U.S. tax laws.

If you are considering the purchase of our common shares, you should consult your own tax advisors concerning the U.S. federal income tax consequences to you in light of your particular situation as well as any consequences arising under the laws of any other taxing jurisdiction.

Taxation of Dividends

Subject to the discussion below under "Passive Foreign Investment Company Consequences," the gross amount of distributions on our common shares (including amounts withheld to pay Canadian withholding taxes) will be taxable as dividends to a U.S. Holder to the extent paid out of our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Dividends paid on our common shares (including withheld taxes) will be includable in a U.S. Holder's gross income as dividend income when actually or constructively received. Such dividends will not be eligible for the dividends-received deduction generally allowed to corporations with respect to dividends received from U.S. corporations. Distributions treated as dividends that are received by non-corporate U.S. Holders are expected to qualify for the 20% reduced maximum tax rate available for dividends received from a "qualified foreign corporation" provided certain holding period and other requirements are met. However, if we are a Passive Foreign Investment Company, or PFIC, for the taxable year in which the dividends are paid or the preceding taxable year (see "Passive Foreign Investment Company Consequences" below), we will not be treated as a qualified foreign corporation, and therefore the reduced maximum tax rate described above will not apply. Non-corporate U.S. Holders that do not meet a minimum holding period requirement during which they are not protected from the risk of loss or that elect to treat the dividend income as "investment income" under applicable Code provisions will not be eligible for the reduced rates of taxation regardless of our status as a qualified foreign corporation. Further, the rate reduction will not apply to dividends if the recipient of a dividend is obligated to make related payments with respect to positions in substantially similar or related property. This disallowance applies even if the minimum holding period has been met.

Subject to certain conditions and limitations, Canadian tax withheld from dividends paid on our common shares (see "Canadian Federal Income Tax Information—Non-Residents of Canada—Dividends on the Common Shares") may be deducted by a U.S. Holder from adjusted gross income or claimed as a credit against the U.S. Holder's U.S. federal income tax. A U.S. Holder may claim a deduction for Canadian taxes withheld from dividends paid in a taxable year only if the U.S. Holder elects to deduct all foreign income taxes paid in that taxable year. A foreign tax credit may only be claimed against U.S. federal income tax on foreign source income subject to the foreign tax credit limitation. The credit is calculated separately with respect to different categories of income. Dividends paid on our common shares will generally constitute foreign source "passive category income" for foreign tax credit purposes. A special rule will apply if we are a "United States-owned foreign corporation." In that case, dividends paid in a taxable year will be treated as dividends from U.S. sources and foreign sources in proportion to our earnings and profits for the taxable year from U.S. sources and from foreign sources. A U.S. Holder who is eligible to claim benefits under the Treaty however, may treat the entire dividend as one from foreign sources for the purpose of claiming a credit for any Canadian withholding tax deducted from the dividend if the U.S. Holder files the appropriate election on its U.S. federal tax return. We will be treated as a U.S.-owned foreign corporation as long as shares representing 50% or more of the voting power or value of our common shares is owned, directly or indirectly, by U.S. persons. The rules relating to the determination of foreign source income and the foreign tax credit are complex, and availability of a foreign tax credit depends on numerous factors. Each U.S. Holder should consult with its own tax advisor to determine whether its income with respect to our common shares would be foreign source income and whether and to what extent that U.S. Holder would be entitled to the foreign tax credit.

To the extent that the amount of any distribution exceeds our current and accumulated earnings and profits for a taxable year, as determined under U.S. federal income tax principles, the distribution will first be treated as a tax-free return of capital, causing a reduction in the adjusted basis of the common shares (thereby increasing the amount of gain, or decreasing the amount of loss, to be recognized on a subsequent disposition of the common shares), and the balance in excess of adjusted basis will be taxed as capital gain recognized on a sale or exchange. However, we cannot provide any assurance that we will maintain or provide earnings and profits determinations in accordance with U.S. federal income tax principles. Therefore, U.S. Holders should expect that a distribution will generally be treated as a dividend (as discussed above) even if that distribution would otherwise be treated as a non-taxable return of capital or as capital gain under the rules described above.

If a distribution is paid in Canadian dollars, the U.S. dollar value of such distribution on the date of receipt is used to determine the amount of the distribution received by a U.S. Holders. A U.S. Holder who continues to hold such Canadian dollars after the date on which they are received may recognize gain or loss upon their disposition due to exchange rate fluctuations. Generally, such gains and losses will be ordinary income or loss from U.S. sources.

Taxation of Capital Gains

Subject to the discussion below under "Passive Foreign Investment Company Consequences," a U.S. Holder will recognize taxable gain or loss on the sale of our common shares equal to the difference between the amount realized for the common shares and the U.S. Holder's tax basis in the common shares. Such gain or loss will be capital gain or loss. Capital gains of non-corporate U.S. Holders, including individual U.S. Holders, derived with respect to capital assets held for more than one year are eligible for reduced rates of taxation. The deductibility of capital losses is subject to limitations. Any gain or loss recognized by a U.S. Holder will generally be U.S. source gain or loss for foreign tax credit limitation purposes.

Passive Foreign Investment Company Consequences

In general, a corporation organized outside the U.S. will be treated as a PFIC in any taxable year in which either (i) at least 75% of its gross income is "passive income" or (ii) on average at least 50% of its assets is attributable to assets that produce passive income or are held for the production of passive income. Passive income for this purpose generally includes, among other things, dividends, interest, royalties, rents, and gains from commodities and currency transactions and from the sale or exchange of property that gives rise to passive income. Assets that produce or are held for the production of passive income include cash, even if held as working capital or raised in a public offering, marketable securities and other assets that may produce passive income. The average percentage of a corporation's assets that produce or are held for the production of passive income generally is determined on the basis of the fair market value of the corporation's assets at the end of each quarter. In determining whether a foreign corporation is a PFIC, a proportionate share of the income and assets of each corporation in which it owns, directly or indirectly, at least a 25% interest (by value) is taken into account.

Based on the nature of our business, the projected composition of our income and estimated fair market value of our assets, we do not believe that we were characterized as a PFIC in 2013 and we do not expect to be a PFIC in 2014, although we could be a PFIC in one or more subsequent years. Our status as a PFIC is a fact-intensive determination made on an annual basis and we cannot provide any assurance regarding our PFIC status for the future taxable years. Neither our U.S. counsel nor U.S. tax advisor expresses any opinion with respect to our PFIC status or with respect to our expectations regarding our PFIC status.

If we are a PFIC in any taxable year during which a U.S. Holder owns our common shares, such U.S. Holder would be subject to taxation under the rules related to "excess distributions." Under such rules, additional taxes and interest charges would apply to certain distributions by us or to gain upon dispositions of our shares if a U.S. Holder has not elected to have his or her investment in our common shares treated as an investment in a "qualified electing fund" or has not made a "mark-to-market election." If we are a PFIC, all the gains recognized on disposition of our common shares would be treated as an excess distribution. In the case of an actual distribution, such distribution from us would be treated as an excess distribution only to the extent the total of actual distributions during a taxable year received by the U.S. Holder exceeds 125% of the average of actual distributions received in the three preceding taxable years, or, if shorter, the U.S. Holder's holding period for our common shares. In these circumstances, the tax and interest charges will be determined by allocating such distributions ratably over the U.S. Holder's holding period for the common shares. The amount allocated to the current taxable year (i.e. the year in which the gain is recognized or the distribution occurs) and any year prior to the first taxable year in which we are a PFIC would be taxed as ordinary income earned in the current taxable year, and the amount allocated to each of the other years in the holding period would be subject to a special tax and interest charge.

The amount allocated to prior taxable years in which we are a PFIC will be taxed at the highest marginal rates in effect for individuals or corporations as applicable to ordinary income for each such taxable year, and an interest charge, generally applicable to underpayments of tax, will be added to the tax. If we are a PFIC at any time when a U.S. Holder holds our common shares, we will generally continue to be treated as a PFIC with respect to the U.S. Holder for all succeeding years during which the U.S. Holder holds our common shares even if we cease to meet the PFIC gross income test or asset test. However, if we cease to meet these tests, a U.S. Holder can avoid the continuing impact of the PFIC rules by making a special election (a "Purging Election") to recognize gain in the manner described above as if our common shares had been sold on the last day of the last taxable year during which we were a PFIC. In addition, for a U.S. Holder making such an election, a new holding period would be deemed to begin for our common shares for purposes of the PFIC rules. After the Purging Election, the common shares with respect to which the Purging Election was made will not be treated as shares in a PFIC unless we subsequently become a PFIC.

The tax consequences that would apply if we were a PFIC would be different from those described above if a U.S. Holder were able to make a valid "qualified electing fund," or QEF, election. For each year that we meet the PFIC gross income test or asset test, an electing U.S. Holder would be required to include in gross income, its pro rata share of our net ordinary income and net capital gains, if any, as determined under U.S. federal income tax principles. The U.S. Holder's adjusted tax basis in our shares would be increased by the amount of such inclusions. An actual distribution to the U.S. Holder out of such income generally would not be treated as a dividend and would decrease the U.S. Holder's adjusted tax basis in our shares. Gain realized from the sale of our shares covered by a QEF election would be taxed as a capital gain. Generally, a QEF election must be made by the U.S. Holder in a timely filed tax return for the first taxable year in which the U.S. Holder held our shares that includes the close of our taxable year for which we met the PFIC gross income test or asset test. A QEF election is made on IRS Form 8621. U.S. Holders will be eligible to make QEF elections only if we agree to provide U.S. Holders with the information they will need to comply with the QEF rules. If we are a PFIC in the current or a future tax year, we will provide U.S. Holders with the information that is necessary in order for them to make a QEF election and to report their common shares of ordinary earnings and net capital gains for each year for which we are a PFIC.

The tax consequences that would apply if we were a PFIC would also be different from those described above if a timely and valid "mark-to-market" election is made by a U.S. Holder of our common shares. An electing U.S. Holder generally would take into account as ordinary income for each year that we meet the PFIC gross income test or asset test, the excess of the fair market value of our common shares held at the end of the taxable year over the adjusted tax basis of such common shares. The U.S. Holder would also take into account, as an ordinary loss for each year that we meet the PFIC gross income test or asset test, the excess of the adjusted tax basis of such common shares over their fair market value at the end of the taxable year, but only to the extent of the aggregate of the amounts previously included in income as a result of the mark-to-market election. The U.S. Holder's tax basis in our common shares would be adjusted to reflect any income or loss resulting from the mark-to-market election. Any gain from a sale, exchange or other disposition of the common shares in any taxable year in which we are a PFIC would be treated as ordinary income and any loss from such sale, exchange or other disposition would be treated first as ordinary loss to the extent of any net mark-to-market gains previously included in income and thereafter as capital loss. If, after having been a PFIC for one or more taxable years, we cease to be classified as a PFIC, the U.S. Holder would not be required to take into account any latent gain or loss in the manner described above and any realized gain or loss would be classified as a capital gain or loss. A mark-to-market election will not apply to our common shares for any taxable year during which we are not a PFIC, but it will remain in effect with respect to any subsequent taxable year in which we become a PFIC. Such election will not apply to any subsidiary that we own.

A mark-to-market election is available to a U.S. Holder only if the common shares are considered "marketable stock." Generally, stock will be considered marketable stock if it is "regularly traded" on a "qualified exchange" within the meaning of applicable U.S. Treasury regulations. A class of stock is regularly traded during any calendar year during which such class of stock is traded, other than in de minimis quantities, on at least 15 days during each calendar quarter. We expect that our common shares will be marketable stock as long as they remain listed on NASDAQ and are regularly traded.

If we are a PFIC in any taxable year during which a U.S. Holder owns the common shares, such U.S. Holder may also suffer adverse tax consequences under the PFIC rules described above with respect to any lower-tier PFIC in which we have a direct or indirect equity interest.

Each U.S. Holder who is a shareholder of a PFIC must file an annual report containing certain information as the U.S. Treasury may require.

Net Investment Income Tax

Certain U.S. Holders who are individuals, estates or trusts will be subject to a 3.8% U.S. federal tax on all or a portion of their "net investment income," which includes all or a portion of their dividends (or deemed dividends) on our common shares and net gains from the disposition of our common shares. U.S. Holders that are individuals, estates or trusts should consult their tax advisors regarding the applicability of the U.S. federal tax on net investment income to any of their income or gains in respect of our common shares.

Information Reporting and Backup Withholding

In general, information reporting will apply to dividends in respect of our common shares and the proceeds from the sale or disposition of our common shares that are paid to a U.S. Holder within the U.S. (and in certain cases, outside the U.S.), unless the U.S. Holder is an exempt recipient. Backup withholding may apply to such payments if the U.S. Holder fails to provide a taxpayer identification number or certification of other exempt status or if the U.S. Holder has previously failed to report in full dividend or interest income. If backup withholding applies to a payment, we or our paying agent will deduct the amount of any required withholding directly from such payment and remit it directly to the U.S. Treasury on behalf of the U.S. Holder. Backup withholding is not an additional tax. Any amounts withheld by us or our paying agent under the backup withholding rules will be allowed as a refund or a credit against the U.S. Holder's U.S. federal income tax liability provided the required information is timely furnished to the IRS.

U.S. Holders are urged to consult with their tax advisors regarding the applicable U.S. disclosure and information reporting requirements. In certain circumstances, the failure to comply with disclosure and information reporting requirements will result in an extension of the statute of limitations on the assessment and collection of U.S. federal income taxes applicable to the U.S. Holder.

Disclosure Requirements for Specified Foreign Financial Assets

Certain U.S. Holders (and to the extent provided in IRS guidance, certain non-U.S. Holders) who hold interests in "specified foreign financial assets" (as defined in Section 6038D of the Code) are generally required to file an IRS Form 8938 as part of their U.S. federal income tax returns with information relating to such assets for each taxable year in which the aggregate value of all such assets exceeds $75,000 at any time during the taxable year or $50,000 on the last day of the taxable year (or such higher dollar amount as prescribed by applicable IRS guidance). "Specified foreign financial assets" generally include, among other assets, financial accounts maintained by foreign financial institutions, and our common shares, unless the shares are held through an account maintained with a financial institution. Substantial penalties may apply to any failure to timely file IRS Form 8938. Additionally, in the event an applicable U.S. Holder (and to the extent provided in IRS guidance, a non-U.S. Holder) that is required to file IRS Form 8938 does not file such form, the statute of limitations on the assessment and collection of U.S. federal income taxes of such holder for the related tax year may not close until three years after the date that the required information is filed. Prospective investors are encouraged to consult with their own tax advisors regarding the possible reporting obligations under these disclosure requirements.

Canadian Federal Income Tax Information

The following summary describes, as of the date hereof, the principal Canadian federal income tax consequences under the Income Tax Act (Canada), or the Canadian Tax Act, generally applicable to a holder, or a Holder, who acquires the common shares pursuant to this offering and who, for the purposes of the Canadian Tax Act, and at all relevant times, beneficially owns the common shares as capital property, and deals at arm's length with, and is not affiliated with, us or the underwriters. The common shares will generally be considered to be capital property for this purpose unless either the Holder holds (or will hold) such common shares in the course of carrying on a business of trading or dealing in securities, or the Holder has acquired (or will acquire) such common shares in a transaction or transactions considered to be an adventure or concern in the nature of trade.

This summary is not applicable to: (a) a Holder that is a "financial institution," as defined in the Canadian Tax Act for purposes of the mark-to-market rules; (b) a Holder, an interest in which is or would be a "tax shelter investment" as defined in the Canadian Tax Act; (c) a Holder that is a "specified financial institution" as defined in the Canadian Tax Act; (d) a Holder that is a corporation that has elected in the prescribed form and manner and has otherwise met the requirements to use functional currency tax reporting as set out in the Canadian Tax Act; (e) a Holder that is a corporation resident in Canada, and is, or becomes, controlled by a non-resident corporation for the purposes of the "foreign affiliate dumping" rules in section 212.3 of the Canadian Tax Act; or (f) a Holder that, with respect to the common shares, has or that has entered into a "synthetic disposition arrangement " or a "derivative forward agreement" as those terms are defined in the Canadian Tax Act. In addition, this summary does not address the deductibility of interest by a holder of common shares that has borrowed money or otherwise incurred debt in connection with the acquisition of common shares. Any such Holder to which this summary does not apply should consult its own tax advisor.

This summary is based upon the current provisions of the Canadian Tax Act, the regulations adopted thereunder, or the Canadian Tax Regulations, and counsel's understanding of the current published administrative and assessing policies and practices of the Canada Revenue Agency. The summary also takes into account all specific proposals to amend the Canadian Tax Act and the Canadian Tax Regulations that have been publicly announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof, or the Canadian Tax Proposals, and assumes that all such Canadian Tax Proposals will be enacted in the form proposed. No assurance can be given that the Canadian Tax Proposals will be enacted in the form proposed or at all. This summary does not otherwise take into account or anticipate any changes in law, administrative policy or assessing practice, whether by way of legislative, regulatory, judicial or administrative action or interpretation, nor does it address any provincial, territorial or foreign tax considerations.

This summary is not exhaustive of all possible Canadian federal income tax considerations of purchasing common shares. The summary is of a general nature only and is not intended to be, and should not be construed to be, legal, business, or tax advice to any prospective Holder. Prospective Holders should consult their own tax advisors as to the Canadian federal tax consequences, and the tax consequences of any other jurisdiction, applicable to them having regard to their own particular circumstances.

All amounts in a currency other than the Canadian dollar relating to the acquisition, holding and disposition of the common shares must be converted into Canadian dollars based on the exchange rates determined in accordance with the Canadian Tax Act. The amount of dividends to be included in income, and capital gains and losses realized by a Holder, may be affected by fluctuations in the relevant exchange rates.

Residents of Canada

The following discussion applies to Holders who, for the purposes of the Canadian Tax Act, and at all relevant times, are residents of Canada, or Canadian Resident Holders.

Certain Canadian Resident Holders whose common shares might not otherwise qualify as capital property may, in certain circumstances, treat such common shares and every Canadian security, as defined in the Canadian Tax Act, owned or subsequently acquired by such holder as capital property by making an irrevocable election pursuant to subsection 39(4) of the Canadian Tax Act. Canadian Resident Holders contemplating making a subsection 39(4) election should consult their advisor for advice as to whether the election is available or advisable in their particular circumstances.

Dividends on the Common Shares

Dividends received or deemed to be received on the common shares by a Canadian Resident Holder who is an individual (other than certain trusts) will be included in income and will be subject to the gross-up and dividend tax credit rules normally applicable under the Canadian Tax Act to taxable dividends received from taxable Canadian corporations (as defined in the Canadian Tax Act). We may designate all or a portion of such dividends as "eligible dividends" that are entitled to an enhanced gross-up and dividend tax credit regime. We will notify our shareholders of any such designations at the appropriate times.

Dividends received or deemed to be received on the common shares by a Canadian Resident Holder that is a corporation will be included in its income and will generally be deductible in computing its taxable income. A Canadian Resident Holder that is a "private corporation" or a "subject corporation," each as defined in the Canadian Tax Act, may be liable under Part IV of the Canadian Tax Act to pay a refundable tax at a rate of 33 1/3% on dividends received or deemed to be received on the common shares to the extent such dividends are deductible in computing the Canadian Resident Holder's taxable income. Such refundable tax will generally be refunded to a corporate Canadian Resident Holder at the rate of CAD$1.00 for every CAD$3.00 of taxable dividends paid while it is a private corporation.

Dispositions of the Common Shares

A disposition, or a deemed disposition, of a common share (other than to us unless purchased by us in the open market in the manner in which shares are normally purchased by any member of the public in the open market) by a Canadian Resident Holder will generally give rise to a capital gain (or a capital loss) equal to the amount by which the proceeds of disposition of the common share, net of any reasonable costs of disposition, exceed (or are less than) the adjusted cost base of the common share to the Canadian Resident Holder. For this purpose, the adjusted cost

base to a Canadian Resident Holder of the common shares will be determined at any time by averaging the cost of such common shares with the adjusted cost base of any other common shares owned by the holder as capital property at that time. Such capital gain (or capital loss) will be subject to the treatment described below under "Taxation of Capital Gains and Capital Losses."

Refundable Tax

A Canadian Resident Holder that is throughout the year a "Canadian-controlled private corporation," as defined in the Canadian Tax Act, may be liable to pay a refundable tax at a rate of 6 2/3% on certain investment income, including taxable capital gains (as defined below), but excluding dividends or deemed dividends deductible in computing taxable income. Such refundable tax will generally be refunded to a corporate Canadian Resident Holder at the rate of CAD$1.00 for every CAD$3.00 of taxable dividends paid while it is a private corporation.

Taxation of Capital Gains and Capital Losses

Generally, one-half of any capital gain (a taxable capital gain) realized by a Canadian Resident Holder for a taxation year must be included in the Canadian Resident Holder's income in the year. Subject to and in accordance with the provisions of the Canadian Tax Act, a Canadian Resident Holder is required to deduct one-half of any capital loss (an allowable capital loss) realized in the year from taxable capital gains realized in that year, and allowable capital losses in excess of taxable capital gains may be carried back and deducted in any of the three preceding taxation years, or carried forward and deducted in any subsequent year, from net taxable capital gains realized in such years (but not against other income) to the extent and under the circumstances described in the Canadian Tax Act. If the Canadian Resident Holder is a corporation, any such capital loss realized on the sale of a common share may in certain circumstances be reduced by the amount of any dividends which have been received or which are deemed to have been received on the common share. Similar rules may apply where a corporation is a member of a partnership or a beneficiary of a trust that owns shares, directly or indirectly through a partnership or a trust.

Minimum Tax

Individuals, including certain trusts, are subject to a minimum tax. Generally, dividends received or deemed to be received on the common shares and capital gains realized on the disposition of common shares may result in a Canadian Resident Holder being liable for minimum tax. Canadian Resident Holders should consult with their own tax advisors with respect to the potential application of the minimum tax.

Non-Residents of Canada

The following discussion applies to a Holder who, for the purposes of the Canadian Tax Act, and at all relevant times, is not (and is not deemed to be) resident in Canada and will not use or hold (and will not be deemed to use or hold) the common shares in, or in the course of, carrying on a business or part of a business in Canada, or a Non-Resident of Canada Holder. In addition, this discussion does not apply to a Non-Resident of Canada Holder that carries on or is deemed to carry on, an insurance business in Canada and elsewhere or to an "authorized foreign bank," as defined in the Canadian Tax Act, or to a Non-Resident of Canada Holder that would be subject to the proposed "treaty shopping" provisions included for discussion purposes in the 2014 Canadian Federal Budget tabled on February 11, 2014, if those provisions were law. Such Holders should consult their own tax advisors.

Dividends on the Common Shares

Canadian withholding tax at a rate of 25% (subject to reduction under the provisions of any applicable income tax treaty or convention) will be payable on the gross amount of dividends on the common shares paid or credited, or deemed to be paid or credited, to a Non-Resident of Canada Holder. The Canadian withholding taxes will be deducted directly by us or our paying agent from the amount of the dividend otherwise payable and remitted to the Receiver General of Canada. The rate of withholding tax applicable to a dividend paid on the common shares to a Non-Resident of Canada Holder who is a resident of the U.S. for purposes of the Canada-U.S. Tax Convention, or the Convention, beneficially owns the dividend and qualifies for the full benefits of the Convention will generally be reduced to 15% or, if such a Non-Resident of Canada Holder is a corporation that owns at least 10% of our voting shares, to 5%. Not all persons who are residents of the U.S. for purposes of the Convention will qualify for the benefits of the Convention. A Non-Resident Holder of Canada who is a resident of the U.S. is advised to consult its tax advisor in this regard. The rate of withholding tax on dividends is also reduced under other bilateral income tax treaties or conventions to which Canada is a signatory.

Dispositions of the Common Shares

A Non-Resident of Canada Holder will not be subject to tax under the Canadian Tax Act in respect of any capital gain realized by such Non-Resident of Canada Holder on a disposition, or deemed disposition, of the common shares unless the common shares constitute "taxable Canadian property," as defined in the Canadian Tax Act, of the Non-Resident of Canada Holder at the time of disposition and the holder is not entitled to an exemption under the applicable income tax treaty or convention. As long as the common shares are then listed on a "designated stock exchange" (which currently includes the NASDAQ), the common shares generally will not constitute taxable Canadian property of a Non-Resident of Canada Holder, unless (a) at any time during the 60-month period preceding the disposition: (i) one or any combination of (A) the Non-Resident of Canada Holder, (B) persons not dealing at arm's length with such Non-Resident of Canada Holder, and (C) pursuant to certain Canadian Tax Proposals released on July 12, 2013, partnerships in which the Non-Resident of Canada Holder or a person described in (B) holds a membership interest directly or indirectly through one or more partnerships, owned 25% or more of our issued shares of any class or series; and (ii) more than 50% of the fair market value of the common shares was derived, directly or indirectly, from a combination of real or immoveable property situated in Canada, "Canadian resource properties," as such term is defined in the Canadian Tax Act, "timber resource properties," as such term is defined in the Canadian Tax Act, or options in respect of interests in, or for civil law rights in, any such properties whether or not the property exists, or (b) the common shares are otherwise deemed to be taxable Canadian property. If the common shares are considered taxable Canadian property to a Non-Resident of Canada Holder, an applicable income tax treaty or convention may in certain circumstances exempt that Non-Resident of Canada Holder from tax under the Canadian Tax Act in respect of the disposition or deemed disposition of the common shares. Non-Resident of Canada Holders whose common shares are, or may be, taxable Canadian property should consult their own tax advisors for advice having regard to their particular circumstances.

As long as the common shares are listed at the time of their disposition or deemed disposition on a "recognized stock exchange" (which currently includes the NASDAQ), as defined in the Canadian Tax Act, a Non-Resident of Canada Holder who disposes of common shares that are taxable Canadian property will not be required to satisfy the obligations imposed under section 116 of the Canadian Tax Act and, as such, the purchaser of such shares will not be required to withhold any amount on the purchase price paid. An exemption from such requirements may also be available in respect of such disposition if the common shares are "treaty-exempt property," as defined in the Canadian Tax Act.

In the event that a common share constitutes taxable Canadian property of a Non-Resident of Canada Holder and any capital gain that would be realized on the disposition or deemed disposition thereof is not exempt from tax under the Canadian Tax Act pursuant to an applicable income tax convention or treaty, the income tax consequences discussed under "Residents of Canada—Dispositions of the Common Shares" and "Residents of Canada—Taxation of Capital Gains and Capital Losses" will generally apply to the Non-Resident of Canada Holder but any such Holder should consult its own tax advisor in this regard.

UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated , 2014, among us and Jefferies LLC and Wells Fargo Securities, LLC, as the representatives of the underwriters named below and the joint book-running managers of this offering, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us on or before , 2014, the respective number of common shares shown opposite its name below at a price per share of $, payable to us against delivery:

UNDERWRITERS	NUMBER OF SHARES
Jefferies LLC	
Wells Fargo Securities, LLC	
Canaccord Genuity Inc.	
Total	4,000,000

The underwriting agreement provides that the obligations of the several underwriters are subject to certain conditions precedent, such as the receipt by the underwriters of officers' certificates and legal opinions and approval of certain legal matters by their counsel and may be terminated at their discretion upon the occurrence of certain stated events. The underwriting agreement provides that the underwriters will purchase all of the common shares if any of them are purchased, other than those shares covered by the option to purchase additional common shares described below. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated. We have agreed to indemnify the underwriters and certain of their controlling persons against certain liabilities, including liabilities under the Securities Act of 1933, as amended, or the Securities Act, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

Under the terms of our collaboration agreement, Teva Pharmaceutical Industries Ltd., or Teva, one of our pharmaceutical partners, or an affiliate of Teva will purchase $10.0 million of our common shares in this offering at the initial public offering price. The underwriters will receive the same discount from any common shares purchased by Teva or its affiliate as they will from any other common shares sold to the public in this offering.

The underwriters have advised us that, following the completion of this offering, they currently intend to make a market in our common shares as permitted by applicable laws and regulations. However, the underwriters are not obligated to do so, and the underwriters may discontinue any market-making activities at any time without notice in their sole discretion. Accordingly, no assurance can be given as to the liquidity of the trading market for our common shares, that you will be able to sell any of the common shares held by you at a particular time or that the prices that you receive when you sell will be favorable.

The underwriters are offering the common shares subject to their acceptance of the common shares from us and subject to prior sale. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part. In addition, the underwriters have advised us that they do not intend to confirm sales to any account over which they exercise discretionary authority.

Commission and Expenses

The underwriters have advised us that they propose to offer the common shares to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers, which may include the underwriters, at that price less a concession not in excess of $ per common share. After the offering, the initial public offering price and the concession to dealers may be reduced by the representatives of the underwriters. No such reduction will change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

The following table shows the public offering price, the underwriting discounts and commissions that we are to pay the underwriters and the proceeds, before expenses, to us in connection with this offering. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

	PER SHARE		TOTAL	
	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES	WITHOUT OPTION TO PURCHASE ADDITIONAL SHARES	WITH OPTION TO PURCHASE ADDITIONAL SHARES
Public offering price	$	$	$	$
Underwriting discounts and commissions paid by us	$	$	$	$
Proceeds to us, before expenses	$	$	$	$

We estimate expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $4.3 million. We have also agreed to reimburse the underwriters for up to $30,000 of expenses related to the review of this offering by the Financial Industry Regulatory Authority, Inc.

Concurrent Private Placement

Pursuant to the terms of our common share put agreement, an affiliate of Genentech, Inc., one of our pharmaceutical partners, will purchase $5.0 million of our common shares in a separate private placement concurrent with the completion of this offering at a price per share equal to the initial public offering price. The sale of such shares will not be registered under the Securities Act of 1933, as amended. The closing of this offering is not conditioned upon the closing of the concurrent private placement. In connection with the concurrent private placement, the underwriters will receive an aggregate cash fee equal to 7% of the gross sales price of the common shares sold in the concurrent private placement.

Determination of Offering Price

Prior to this offering, there has not been a public market for our common shares. Consequently, the initial public offering price for our common shares will be determined by negotiations between us and the representatives of the underwriters. Among the factors to be considered in these negotiations will be prevailing market conditions, our financial information, market valuations of other companies that we and the underwriters believe to be comparable to us, estimates of our business potential, the present state of our development and other factors deemed relevant.

We offer no assurances that the initial public offering price will correspond to the price at which our common shares will trade in the public market subsequent to the offering or that an active trading market for our common shares will develop and continue after the offering.

Listing

We have applied to list our common shares on The NASDAQ Global Market under the trading symbol "XENE".

Option to Purchase Additional Shares

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase, from time to time, in whole or in part, up to an aggregate of 600,000 common shares from us at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. If the underwriters exercise this option, each underwriter will be obligated, subject to specified conditions, to purchase a number of additional shares proportionate to that underwriter's initial purchase commitment as indicated in the table above. This option may be exercised only if the underwriters sell more common shares than the total number set forth on the cover page of this prospectus.

No Sales of Similar Securities

We, all our officers and directors and holders of substantially all of our outstanding common shares and other securities have agreed, subject to specified exceptions, not to directly or indirectly:

- sell, offer, contract or grant any option to sell (including any short sale), lend, pledge, transfer, establish or increase an open "put equivalent position" or liquidate or decrease a "call equivalent position" within the meaning of Rule 16a-1(h) and Rule 16a-1(b) under the Securities Exchange Act of 1934, as amended, or the Exchange Act, or
- otherwise dispose of any common shares, options or warrants to acquire common shares, or securities exchangeable or exercisable for or convertible into common shares currently or hereafter owned either of record or beneficially, or
- enter into any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of common shares, or of options or warrants to acquire common shares, or securities or rights exchangeable or exercisable for or convertible into common shares, or
- make any demand for, or exercise any right with respect to, the registration under the Securities Act of the offer and sale of any common shares, or of options or warrants to acquire common shares, or securities or rights exchangeable or exercisable for or convertible into common shares, or cause to be filed a registration statement, prospectus or prospectus supplement (or an amendment or supplement thereto) with respect to any such registration, or
- publicly announce an intention to do any of the foregoing for a period of 180 days after the date of this prospectus without the prior written consent of the representatives of the underwriters.

The foregoing restriction terminates after the close of trading of our common shares on and including the 180th day after the date of this prospectus and shall not apply to our issuance during the 180-day restricted period of a number of common shares not greater than 5% of the total number of common shares outstanding to one or more counterparties in connection with the consummation of any strategic transaction.

The representatives of the underwriters may, in their sole discretion and at any time or from time to time before the termination of the 180-day period release all or any portion of the securities subject to lock-up agreements. There are no existing agreements between the underwriters and any of our shareholders who will execute a lock-up agreement, providing consent to the sale of shares prior to the expiration of the lock-up period.

Stabilization

The underwriters have advised us that, pursuant to Regulation M under the Exchange Act, certain persons participating in the offering may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of our common shares at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either "covered" short sales or "naked" short sales.

"Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional common shares in this offering. The underwriters may close out any covered short position by either exercising their option to purchase additional common shares or purchasing common shares in the open market. In determining the source of common shares to close out the covered short position, the underwriters will consider, among other things, the price of common shares available for purchase in the open market as compared to the price at which they may purchase common shares through the option to purchase additional common shares.

"Naked" short sales are sales in excess of the option to purchase additional common shares. The underwriters must close out any naked short position by purchasing common shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common shares in the open market after pricing that could adversely affect investors who purchase in this offering.

A stabilizing bid is a bid for the purchase of common shares on behalf of the underwriters for the purpose of fixing or maintaining the price of the common shares. A syndicate covering transaction is the bid for or the purchase of common shares on behalf of the underwriters to reduce a short position incurred by the underwriters in connection

with the offering. Similar to other purchase transactions, an underwriter's purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common shares or preventing or retarding a decline in the market price of our common shares. As a result, the price of our common shares may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the underwriters to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the common shares originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common shares. The underwriters are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

The underwriters may also engage in passive market making transactions in our common shares on The NASDAQ Global Market in accordance with Rule 103 of Regulation M during a period before the commencement of offers or sales of common shares in this offering and extending through the completion of distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker's bid, that bid must then be lowered when specified purchase limits are exceeded.

Electronic Distribution

A prospectus in electronic format may be made available by e-mail or on the websites or through online services maintained by one or more of the underwriters or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of common shares for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations. Other than the prospectus in electronic format, the information on the underwriters' websites and any information contained in any other website maintained by any of the underwriters is not part of this prospectus, has not been approved and/or endorsed by us or the underwriters and should not be relied upon by investors.

Other Activities and Relationships

The underwriters and certain of their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The underwriters and certain of their respective affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the underwriters and certain of their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the underwriters or their respective affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The underwriters and their respective affiliates may hedge such exposure by entering into transactions which consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the common shares offered hereby. Any such short positions could adversely affect future trading prices of the common shares offered hereby. The underwriters and certain of their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Disclaimers About Non-U.S. and Canadian Jurisdictions

This offering is being made concurrently in the United States and the Provinces of British Columbia, Alberta, and Ontario in Canada. Our common shares will be offered in the United States and Canada through the underwriters,

either directly or through their respective United States or Canadian broker-dealer affiliates or agents, as applicable. No securities will be offered or sold in any jurisdiction except by or through brokers or dealers duly registered under the applicable securities laws of that jurisdiction or in circumstances where an exemption from such registered dealer requirements is available.

European Economic Area. In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any shares which are the subject of the offering contemplated by this prospectus may not be made in that Relevant Member State except that an offer to the public in that Relevant Member State of any shares may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

(a) to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
(b) to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000 and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;
(c) to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the representatives of the underwriters for any such offer; or
(d) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of the shares shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

Each person in a Relevant Member State who receives any communication in respect of, or who acquires any shares under, the offers contemplated in this prospectus will be deemed to have represented, warranted and agreed to and with each underwriter and us that:

(a) it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive; and
(b) in the case of any shares acquired by it as a financial intermediary, as that term is used in Article 3(2) of the Prospectus Directive, (i) the shares acquired by it in the offer have not been acquired on behalf of, nor have they been acquired with a view to their offer or resale to, persons in any Relevant Member State, other than qualified investors, as that term is defined in the Prospectus Directive, or in circumstances in which the prior consent of the representatives of the underwriters has been given to the offer or resale; or (ii) where shares have been acquired by it on behalf of persons in any Relevant Member State other than qualified investors, the offer of those shares to it is not treated under the Prospectus Directive as having been made to such persons.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares to be offered so as to enable an investor to decide to purchase any shares, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression "Prospectus Directive" means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

United Kingdom. Each underwriter has represented, warranted and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated any invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, or the FSMA) to persons who are investment professionals falling within Article 19(5) of the FSMA (Financial Promotion) Order 2005 or in circumstances in which Section 21(1) of the FSMA does not apply to us; and
(b) it has complied with and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares in, from or otherwise involving the United Kingdom.

LEGAL MATTERS

We are being represented by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. The validity of the common shares being offered by this prospectus and legal matters relating to Canadian laws will be passed upon for us by McCarthy Tétrault LLP, Vancouver, British Columbia. The underwriters are being represented by Cooley LLP, San Diego and San Francisco, California. Blake, Cassels & Graydon LLP, Vancouver, British Columbia, is acting as Canadian counsel to the underwriters. As of the date of this prospectus, the members and associates of Wilson Sonsini Goodrich & Rosati, Professional Corporation, as a group, own less than 1% of our outstanding securities, the partners and associates of McCarthy Tétrault LLP, as a group, own less than 1% of our outstanding securities, the partners and associates of Cooley LLP, as a group, own less than 1% of our outstanding securities and the partners and associates of Blake, Cassels & Graydon LLP, as a group, own less than 1% of our outstanding securities.

EXPERTS

The financial statements of Xenon Pharmaceuticals Inc. as of December 31, 2012 and 2013, and for each of the years in the three-year period ended December 31, 2013 have been included herein in reliance on the report of KPMG LLP, independent registered public accounting firm, appearing elsewhere herein, and upon the authority of said firm as experts in auditing and accounting. KPMG LLP is independent with respect to us within the meaning of the Rules of Professional Conduct of the Institute of Chartered Accountants of British Columbia and under all relevant U.S. professional and regulatory standards, including PCAOB Rule 3520.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the U.S. Securities and Exchange Commission, or the SEC, a registration statement on Form S-1 under the Securities Act of 1933, as amended, or the Securities Act, with respect to the common shares offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, some items of which are contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and the common shares offered hereby, we refer you to the registration statement, including the exhibits filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or document referred to are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement is this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit.

You may read and copy the registration statement, including the exhibits and schedules thereto, at the Public Reference Room of the SEC, 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy statements and other information about issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

Upon completion of this offering, we will become subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, will file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information will be available for inspection and copying at the public reference room and website of the SEC referred to above. We maintain a website at www.xenon-pharma.com. You may access our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The reference to our website address does not constitute incorporation by reference of the information contained on our website, and you should not consider the contents of our website in making an investment decision with respect to our common shares.

XENON PHARMACEUTICALS INC.

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and
Shareholders of Xenon Pharmaceuticals Inc.

We have audited the accompanying balance sheets of Xenon Pharmaceuticals Inc. (the “Company”) as of December 31, 2012 and 2013, and the related statements of operations, comprehensive income (loss), changes in redeemable convertible preferred shares and shareholders’ deficit, and cash flows for each of the years in the three-year period ended December 31, 2013. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Xenon Pharmaceuticals Inc. as of December 31, 2012 and 2013 and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2013, in conformity with U.S. generally accepted accounting principles.

/s/ KPMG LLP
Chartered Accountants

February 19, 2014, except as to note 18(b) which is as of October 1, 2014
Vancouver, Canada

XENON PHARMACEUTICALS INC.

Balance Sheets

(Expressed in thousands of U.S. dollars except share data)

	DECEMBER 31, 2012	DECEMBER 31, 2013	JUNE 30, 2014	PRO FORMA JUNE 30, 2014
			(unaudited)	
Assets				
Current assets:				
Cash and cash equivalents	$ 60,162	$ 37,950	$ 35,087	$ 35,087
Marketable securities	—	11,326	9,623	9,623
Accounts receivable	392	440	364	364
Prepaid expenses and other current assets	149	153	134	134
Total current assets	60,703	49,869	45,208	45,208
Deferred financing fees	—	2,739	3,480	3,480
Property, plant and equipment, net	2,602	1,879	2,024	2,024
Total assets	$ 63,305	$ 54,487	$ 50,712	$ 50,712
Liabilities and Shareholders' Deficit				
Current liabilities:				
Accounts payable and accrued expenses	2,181	2,283	2,149	2,149
Deferred revenue	17,015	15,920	15,082	15,082
Total current liabilities	19,196	18,203	17,231	17,231
Deferred revenue, less current portion	29,637	11,886	6,127	6,127
Deferred tenant inducements	184	282	248	248
Note payable	1,665	—	—	—
Total liabilities	$ 50,682	$ 30,371	$ 23,606	$ 23,606
Collaboration agreements (See Note 14)				
Commitments and contingencies (See Note 15)				
Subsequent events (See Note 18)				
Redeemable convertible preferred shares:				
Series A Convertible Preferred shares, without par value; 1,205,761 authorized and 1,151,468 issued and outstanding at each of December 31, 2012 and 2013 and June 30, 2014 (unaudited), respectively, and no shares issued and outstanding pro forma	2,939	2,939	2,939	—
Series B Convertible Preferred shares, without par value; 1,028,806 authorized and 994,885 issued and outstanding at each of December 31, 2012 and 2013 and June 30, 2014 (unaudited), respectively, and no shares issued and outstanding pro forma	8,683	8,683	8,683	—
Series E Convertible Preferred shares, without par value; 4,370,920 authorized and 4,322,126 issued and outstanding at each of December 31, 2012 and 2013 and June 30, 2014 (unaudited), respectively, and no shares issued and outstanding pro forma	90,866	90,866	90,866	—
	102,488	102,488	102,488	—
Shareholders' (deficit) equity:				
Common shares, without par value; unlimited shares authorized; 1,330,696, 1,344,627 and 1,348,103 issued and outstanding at December 31, 2012 and 2013 and June 30, 2014 (unaudited), respectively, and 9,084,687 shares issued and outstanding pro forma	6,008	6,147	6,182	108,782
Additional paid-in capital	29,164	29,722	30,064	29,952
Accumulated deficit	(128,784)	(116,752)	(114,149)	(114,149)
Accumulated comprehensive income	3,747	2,511	2,521	2,521
Total shareholders' (deficit) equity	$ (89,865)	$ (78,372)	$ (75,382)	$ 27,106
Total liabilities, shareholders' (deficit) equity and redeemable convertible preferred shares	$ 63,305	$ 54,487	$ 50,712	$ 50,712

The accompanying notes are an integral part of these financial statements.

XENON PHARMACEUTICALS INC.

Statements of Operations

(Expressed in thousands of U.S. dollars except share and per share data)

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	2011	2012	2013	2013	2014
				(unaudited)	
Revenue					
Collaboration revenue	$ 6,915	$ 14,300	$ 27,352	$ 10,985	$ 10,297
Royalties	3	8	4	—	2
	6,918	14,308	27,356	10,985	10,299
Operating expenses:					
Research and development	12,302	10,455	12,303	6,983	5,099
General and administrative	6,730	7,006	5,341	2,828	2,790
Total operating expenses	19,032	17,461	17,644	9,811	7,889
Income (loss) from operations	(12,114)	(3,153)	9,712	1,174	2,410
Other income (expense):					
Interest income	153	144	338	76	278
Interest expense	(91)	(93)	(64)	(41)	—
Foreign exchange gain (loss)	60	(169)	2,035	1,920	(85)
Gain (loss) on write-off and disposal of assets	—	(1,030)	11	11	—
Net income (loss)	(11,992)	(4,301)	12,032	3,140	2,603
Net income attributable to participating securities	—	—	8,199	3,140	2,603
Net income (loss) attributable to common shareholders	$ (11,992)	$ (4,301)	$ 3,833	$ —	$ —
Net income (loss) per share attributable to common shareholders:					
Basic	$ (9.06)	$ (3.24)	$ 2.87	$ 0.00	$ 0.00
Diluted	$ (9.06)	$ (3.24)	$ 1.91	$ 0.00	$ 0.00
Weighted-average shares outstanding:					
Basic	1,323,683	1,327,460	1,337,662	1,332,886	1,347,237
Effects of dilutive securities:					
Stock options	—	—	659,167	—	—
Subscription rights	—	—	12,277	—	—
Diluted	1,323,683	1,327,460	2,009,106	1,332,886	1,347,237
Pro forma net income per share attributable to common shareholders (unaudited):					
Basic			$ 1.33		$ 0.29
Diluted			$ 1.24		$ 0.26
Pro forma weighted-average shares outstanding (unaudited):					
Basic			9,075,863		9,085,116
Diluted			9,735,030		9,828,092

The accompanying notes are an integral part of these financial statements.

XENON PHARMACEUTICALS INC.

Statements of Comprehensive Income (Loss)
(Expressed in thousands of U.S. dollars)

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	2011	2012	2013	2013	2014
				(unaudited)	
Net income (loss)	$(11,992)	$(4,301)	$12,032	$3,140	$2,603
Other comprehensive income (loss):					
Foreign currency translation adjustment	(293)	342	(1,236)	(790)	10
Unrealized gain (loss) on marketable securities measured at fair value	4	(4)	—	—	—
Comprehensive income (loss)	$(12,281)	$(3,963)	$10,796	$2,350	$2,613

The accompanying notes are an integral part of these financial statements.

XENON PHARMACEUTICALS INC.

Statements of Changes in Redeemable Convertible Preferred Shares and Shareholders' Deficit

(Expressed in thousands of U.S. dollars except share and per share data)

	SERIES A CONVERTIBLE PREFERRED SHARES		SERIES B CONVERTIBLE PREFERRED SHARES		SERIES E CONVERTIBLE PREFERRED SHARES		COMMON SHARES		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED DEFICIT	ACCUMULATED COMPREHENSIVE INCOME	TOTAL SHAREHOLDERS' DEFICIT
	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT				
Balance as of January 1, 2011	1,151,468	$ 2,939	994,885	$ 8,683	4,322,126	$ 90,866	1,323,142	$ 5,980	$ 28,328	$ (112,491)	$ 3,698	$ (74,485)
Net loss for the year	—	—	—	—	—	—	—	—	—	(11,992)	—	(11,992)
Unrealized gain on fair value of marketable securities	—	—	—	—	—	—	—	—	—	—	4	4
Cumulative translation adjustment	—	—	—	—	—	—	—	—	—	—	(293)	(293)
Stock option compensation expense	—	—	—	—	—	—	—	—	435	—	—	435
Subscription rights	—	—	—	—	—	—	—	—	12	—	—	12
Issuance of common shares on conversion of subscription rights	—	—	—	—	—	—	646	2	(2)	—	—	—
Issued pursuant to exercise of stock options	—	—	—	—	—	—	436	4	(1)	—	—	3
Balance as of December 31, 2011	1,151,468	$ 2,939	994,885	$ 8,683	4,322,126	$ 90,866	1,324,224	$ 5,986	$ 28,772	$ (124,483)	$ 3,409	$ (86,316)
Net loss for the year	—	—	—	—	—	—	—	—	—	(4,301)	—	(4,301)
Unrealized loss on fair value of marketable securities	—	—	—	—	—	—	—	—	—	—	(4)	(4)
Cumulative translation adjustment	—	—	—	—	—	—	—	—	—	—	342	342
Stock option compensation expense	—	—	—	—	—	—	—	—	406	—	—	406
Subscription rights	—	—	—	—	—	—	—	—	8	—	—	8
Issuance of common shares on conversion of subscription rights	—	—	—	—	—	—	6,472	22	(22)	—	—	—
Balance as of December 31, 2012	1,151,468	$ 2,939	994,885	$ 8,683	4,322,126	$ 90,866	1,330,696	$ 6,008	29,164	$ (128,784)	$ 3,747	$ (89,865)
Net income for the year	—	—	—	—	—	—	—	—	—	12,032	—	12,032
Cumulative translation adjustment	—	—	—	—	—	—	—	—	—	—	(1,236)	(1,236)
Stock option compensation expense	—	—	—	—	—	—	—	—	575	—	—	575
Subscription rights	—	—	—	—	—	—	—	—	73	—	—	73
Issuance of common shares on conversion of subscription rights	—	—	—	—	—	—	5,602	45	(45)	—	—	—
Issued pursuant to exercise of stock options rights	—	—	—	—	—	—	8,329	94	(45)	—	—	49
Balance as of December 31, 2013	1,151,468	$ 2,939	994,885	$ 8,683	4,322,126	$ 90,866	1,344,627	$ 6,147	$ 29,722	$ (116,752)	$ 2,511	$ (78,372)
Net income for the period	—	—	—	—	—	—	—	—	—	2,603	—	2,603
Cumulative translation adjustment	—	—	—	—	—	—	—	—	—	—	10	10
Stock option compensation expense	—	—	—	—	—	—	—	—	373	—	—	373
Issuance of common shares on conversion of subscription rights	—	—	—	—	—	—	2,704	27	(27)	—	—	—
Issued pursuant to exercise of stock options	—	—	—	—	—	—	772	8	(4)	—	—	4
Balance as of June 30, 2014 (unaudited)	1,151,468	$ 2,939	994,885	$ 8,683	4,322,126	$ 90,866	1,348,103	$ 6,182	$ 30,064	$ (114,149)	$ 2,521	$ (75,382)

The accompanying notes are an integral part of these financial statements.

XENON PHARMACEUTICALS INC.

Statements of Cash Flows
(Expressed in thousands of U.S. dollars)

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	2011	2012	2013	2013	2014
				(unaudited)	
Operating activities:					
Net income (loss)	$(11,992)	$ (4,301)	$ 12,032	$ 3,140	$ 2,603
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:					
Depreciation and amortization	1,132	786	705	372	350
Loss (gain) on write-off and disposal of assets	—	1,030	(11)	(11)	—
Stock-based compensation	435	406	575	273	373
Non-cash compensation on issuance of subscription rights	12	8	73	43	—
Interest accrued on note payable	78	77	—	35	—
Deferred tenant inducements	—	183	(115)	(27)	(33)
Foreign exchange loss (gain)	(88)	(34)	94	33	8
Changes in operating assets and liabilities:					
Accounts receivable	(11,008)	11,230	(76)	(423)	73
Prepaid expenses, and other current assets	(107)	162	(14)	(589)	18
Accounts payable and accrued expenses	(354)	540	(228)	(195)	(126)
Deferred revenue	8,203	35,486	(16,357)	(8,265)	(6,333)
Net cash provided by (used in) operating activities	(13,689)	45,573	(3,322)	(5,614)	(3,067)
Investing activities:					
Purchases of property, plant and equipment	(290)	(526)	(156)	(68)	(497)
Sale of property, plant and equipment	—	7	10	—	—
Purchase of marketable securities	—	—	(17,876)	—	(2,946)
Proceeds from marketable securities	14,179	1,010	6,550	—	4,568
Net cash provided by (used in) investing activities	13,889	491	(11,472)	(68)	1,125
Financing activities:					
Note payable	—	—	(1,701)	(1,701)	—
Deferred financing costs	—	—	(2,739)	—	(730)
Proceeds from issuance of common shares	2	—	49	4	4
Net cash provided by (used in) financing activities	2	—	(4,391)	(1,697)	(726)
Effect of exchange rate changes on cash and cash equivalents	(314)	170	(3,027)	(2,971)	(195)
Increase (decrease) in cash and cash equivalents	(112)	46,234	(22,212)	(10,350)	(2,863)
Cash and cash equivalents, beginning of period	14,040	13,928	60,162	60,162	37,950
Cash and cash equivalents, end of period	$ 13,928	$60,162	$ 37,950	$ 49,812	$35,087
Supplemental information:					
Non-cash transactions:					
Fair value of stock options transferred from additional paid-in capital to share capital on exercise	$ 1	—	45	$ —	$ 4
Issuance of common shares on conversion of subscription rights	$ 2	$ 22	$ 45	2	27
Interest paid	$ (13)	$ (16)	$ (69)	(207)	—

The accompanying notes are an integral part of these financial statements.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures)

1. Nature of the Business and Basis of Presentation:

(a) Description of business:

Xenon Pharmaceuticals Inc. (the “Company”), incorporated in 1996 under the British Columbia Business Corporations Act and continued federally in 2000 under the Canada Business Corporation Act, is a clinical-stage biopharmaceutical company discovering and developing a pipeline of differentiated therapeutics for orphan indications that it intends to commercialize on its own, and for larger market indications that it intends to partner with global pharmaceutical companies.

Historically, the Company has funded operations primarily through payments received from its pharmaceutical collaborators and government funding as well as through the sale of redeemable convertible preferred shares in various financing transactions. The Company is seeking to complete an Initial Public Offering (“IPO”) of its common shares in the United States. In the event that the Company does not complete an IPO, the Company may seek alternative funding, such as through existing or new collaboration agreements or through private financings.

These financial statements are presented in U.S. dollars.

The accompanying unaudited interim financial statements and audited annual financial statements of the Company have been prepared in accordance with United States generally accepted accounting principles (“U.S. GAAP”). The accompanying interim financial information is unaudited and reflects all adjustments, consisting of normal recurring adjustments, which, in the opinion of management, are necessary for a fair presentation of results for the interim periods presented.

(b) Unaudited pro forma information:

On August 12, 2013, the Company’s board of directors authorized the Company to submit a confidential draft registration statement to the Securities and Exchange Commission to sell its common shares to the public. Upon the closing of a qualified IPO satisfying certain threshold requirements, or approved by a combination of shareholder votes representing a majority of all preferred shares, along with a majority of the Series B shares and a majority of the Series E shares, all of the outstanding redeemable convertible preferred shares (see Note 10) will automatically convert into common shares.

The outstanding Series A preferred shares and Series B preferred shares will convert into an aggregate of 2,146,353 common shares. Each Series E preferred share is currently convertible at any time at the option of the holder into common shares on a 1:1 basis, subject to certain adjustments. These adjustments differ for some of the Company’s outstanding Series E preferred shares depending on the date of issue, resulting in different conversion ratios for different Series E preferred shares. The conversion rights associated with each of the Company’s Series E preferred shares will increase by 20% if the initial public offering price is below a certain price per share. The unaudited pro forma information has been prepared on the basis that the conversion rights associated with each of the Company’s Series E preferred shares will increase by 20% and that all of the Company’s outstanding Series E preferred shares will therefore convert into 5,579,571 common shares.

The accompanying unaudited pro forma balance sheet as of June 30, 2014 has been prepared to give effect to (i) the automatic conversion of all of the outstanding redeemable convertible preferred shares into an aggregate of 7,725,924 common shares, as described above, and (ii) the exchange of all outstanding subscription rights into common shares as though the proposed IPO had occurred on June 30, 2014. Unaudited pro forma basic and diluted net income per share attributable to common shareholders for the year ended December 31, 2013 and the six months ended June 30, 2014 have been prepared to give effect to (i) the automatic conversion of all of the outstanding redeemable convertible preferred shares into an aggregate of 7,725,924 common shares, as described above, and (ii) the exchange of the weighted-average number of outstanding subscription rights for the period into an aggregate of 11,955 common shares.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

2. Significant Accounting Policies:

(a) Use of estimates:

The preparation of financial statements in conformity with U.S. GAAP requires the Company to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Significant areas of estimates include, but are not limited to, the valuation of accounts receivable, the estimated useful lives of property, plant and equipment, the recoverability of long-lived assets, the timing of revenue recognition, the determination of stock-based compensation and the assessment of contingent liabilities. Actual results could differ materially from those estimates. Estimates and assumptions are reviewed quarterly. All revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

(b) Cash and cash equivalents:

Cash equivalents are highly liquid investments that are readily convertible into cash with terms to maturity of three months or less when acquired.

(c) Segment and geographic information:

Operating segments are defined as components of an enterprise about which separate discrete information is available for evaluation by the chief operating decision maker, or decision making group, in deciding how to allocate resources and in assessing performance. The Company views its operations and manages its business in one operating segment.

(d) Property, plant and equipment:

Property, plant and equipment is stated at historical cost less accumulated depreciation and/or accumulated impairment losses, if any. Subsequent costs are included in the asset's carrying amount or recognized as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Company and the cost of the item can be measured reliably. All other repairs and maintenance are charged to net income (loss) during the financial period in which they are incurred.

Property, plant and equipment are recorded at cost and are amortized over their estimated useful lives using the straight-line method based on the following rates:

ASSET	RATE
Research equipment	5 years
Office furniture and equipment	5 years
Computer equipment	3 years
Leasehold improvements	Over the lesser of lease term or estimated useful life

(e) Impairment of long-lived assets:

The Company monitors its long-lived assets for indicators of impairment. If such indicators are present, the Company assesses the recoverability of affected assets by determining whether the carrying value of such assets is less than the sum of the undiscounted future cash flows of the assets. If such assets are found not to be recoverable, the Company measures the amount of such impairment by comparing the carrying value of the assets to the fair value of the assets, with the fair value generally determined based on the present value of the expected future cash flows associated with the assets. Although current and historical negative cash flows are indicators of impairment, the Company believes that the future cash flows it will receive from the long-lived assets and the potential success of the Company's research programs will exceed the assets' carrying value, and accordingly, the Company believes that no impairment of long-lived assets existed as of December 31, 2012 and 2013, and June 30, 2014 (unaudited).

(f) Concentration of credit risk and of significant customers:

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash, cash equivalents, marketable securities, and accounts receivable. Cash and cash equivalents

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

2. Significant Accounting Policies (continued):

are invested through banks and other financial institutions in the United States and Canada. Such deposits may be in excess of insured limits. The Company maintains cash and cash equivalents with various high credit quality and capitalized financial institutions.

Marketable securities are highly liquid investments with terms to maturity of greater than three months, and less than twelve months, when acquired, and include guaranteed investment certificates as well as government treasury bills and treasury notes. Marketable securities are invested through June 2015.

Accounts receivable are typically unsecured and are concentrated in the pharmaceutical industry due to the Company's multiple collaborations. Accordingly, the Company may be exposed to credit risk generally associated with pharmaceutical companies or specific to the collaboration agreements with its significant pharmaceutical collaborators. To date, the Company has not experienced any material losses related to its receivables.

Collaborators whose collaboration research and development revenue accounted for 10% or more of total revenues were as follows:

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED
	2011	2012	2013	JUNE 30, 2014 (unaudited)
Genentech	$ —	$ 6,948	$12,876	$ 4,010
Merck	6,389	5,562	—	—
Teva	—	—	13,773	6,287

(g) Financial instruments and fair value:

Fair value

U.S. GAAP establishes a fair value hierarchy for inputs to be used to measure fair value of financial assets and liabilities. This hierarchy prioritizes the inputs to valuation techniques used to measure fair value into three levels: Level 1 (highest priority), Level 2, and Level 3 (lowest priority).

- *Level 1*—Unadjusted quoted prices in active markets for identical assets or liabilities that the Company has the ability to access at the balance sheet date.
- *Level 2*—Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (i.e., interest rates, yield curves, etc.), and inputs that are derived principally from or corroborated by observable market data by correlation or other means (market corroborated inputs).
- *Level 3*—Inputs are unobservable and reflect the Company's assumptions as to what market participants would use in pricing the asset or liability. The Company develops these inputs based on the best information available.

Cash equivalents are reflected in the accompanying financial statements at fair value using Level 1. The carrying amount of accounts receivables, accounts payable and accrued expenses and note payable approximates fair value due to the nature and short-term of those instruments.

Marketable securities are highly liquid investments with terms to maturity of greater than three months when acquired. Marketable securities have varying maturities of less than 12 months, are classified as available-for-sale investments and are measured at their fair values under Level 1 of the fair value hierarchy with unrealized holding gains or losses reported in other comprehensive income (loss).

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

2. Significant Accounting Policies (continued):

(h) Revenue recognition:

The Company recognizes revenue when all of the following criteria are met: (i) persuasive evidence of an arrangement exists; (ii) delivery has occurred or services have been rendered; (iii) the Company's price to the collaborator is fixed or determinable; and (iv) collectability is reasonably assured.

The Company generates revenue primarily through collaboration agreements.

Under these collaboration agreements, the Company is eligible to receive non-refundable upfront payments, funding for research and development services, milestone payments, other contingent payments and royalties. In assessing the appropriate revenue recognition related to a collaboration agreement, the Company first determines whether an arrangement includes multiple elements, such as the delivery of intellectual property rights and research and development services. Upfront payments are recorded as deferred revenue in the balance sheet and are recognized as collaboration revenue over the estimated period of research performance that is consistent with the terms of the research and development obligations contained in the collaboration agreement. The Company periodically reviews the estimated period of performance based on the progress made under each arrangement.

The Company recognizes funding related to full-time equivalent staffing funded through collaboration agreements as revenue on a gross basis as it performs or delivers such related services in accordance with the agreement terms, provided that it will receive payment for such services upon standard payment terms.

In January 2011, the Company adopted new authoritative guidance on revenue recognition for multiple element arrangements, Financial Accounting Standards Board ("FASB") Accounting Standards Update ("ASU") No. 2009-13, *Multiple-Deliverable Revenue Arrangements* ("ASU 2009-13"). This guidance, which applies to multiple element arrangements entered into or materially modified on or after January 1, 2011, amends the criteria for separating and allocating consideration in a multiple element arrangement by modifying the fair value requirements for revenue recognition and eliminating the use of the residual method. The estimated fair value of deliverables under the arrangement may be derived using a best estimate of selling price if vendor-specific objective evidence and third-party evidence are not available.

Deliverables under the arrangement will be separate units of accounting provided that a delivered item has value to the customer on a stand-alone basis and if the arrangement does not include a general right of return relative to the delivered item and delivery or performance of the undelivered items is considered probably and substantially in the control of the vendor. The update also provided new guidance regarding how to apply the standard to arrangements that are materially modified following adoption of the update. The potential future impact of the adoption of this update will depend on the nature of any new agreements entered into or material modifications to existing arrangements.

In January 2012, the Company also adopted the guidance FASB ASU No. 2010-17, *Milestones Method of Revenue Recognition* ("ASU 2010-17") that permits the recognition of revenue contingent upon its achievement of a milestone in its entirety, in the period the milestone is achieved, only if the milestone meets certain criteria and is considered to be substantive.

The Company makes judgments which affect the periods over which the Company recognized revenue, including modifying such periods based on any amendments to its collaboration agreements.

(i) Research and development costs:

Research and development costs are expensed in the period in which they are incurred.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

2. Significant Accounting Policies (continued):

(j) Clinical trial expenses:

Clinical trial expenses are a component of research and development costs and include fees paid to contract research organizations, investigators and other vendors who conduct certain product development activities on behalf of the Company. The amount of clinical trial expenses recognized in a period related to service agreements is based on estimates of the work performed using an accrual basis of accounting. These estimates are based on patient enrollment, services provided and goods delivered, contractual terms and experience with similar contracts. The Company monitors these factors and adjusts the estimates accordingly. Prepaid expenses or accrued liabilities are adjusted if payments to service providers differ from estimates of the amount of service completed in a given period.

(k) Share-based compensation:

The Company grants stock options to employees, directors and consultants pursuant to a stock option plan described in Note 12. Compensation expense is recorded for stock options issued to employees and non-employees using the fair value method with a corresponding increase in additional paid-in capital. Any consideration received on exercise of stock options and the purchase of shares is credited to share capital.

Under the fair value based method, share-based payments to non-employees are measured at the fair value of the equity instruments issued, and the awards are periodically re-measured during the vesting period as the options are earned. Any changes therein are recognized over the period and in the same manner as if the Company had paid cash instead of paying with or using equity instruments. The fair value of stock-based awards to employees is measured at the grant date and amortized over the vesting period.

Stock options issued to employees are recorded at the fair value of stock options determined at the date of the grant using the Black-Scholes option-pricing model and a single option award approach and are expensed on a straight-line basis over the vesting period of the options. In determining the expense, the Company deducts the number of options that are expected to be forfeited at the time of a grant and revises this estimate, if necessary, in subsequent years if actual forfeitures differ from those estimated. Any amounts paid by employees on exercise of the stock options and subsequent purchase of shares are credited to share capital.

(l) Net income (loss) per share:

The Company follows the two-class method when computing net income (loss) per share as the Company has issued shares that meet the definition of participating securities. The two-class method determines net income (loss) per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires income available to common shareholders for the period to be allocated between common and participating securities based upon their respective rights to receive dividends as if all income for the period had been distributed.

The Company's redeemable convertible preferred shares contractually entitle the holders of such shares to participate in dividends, but do not contractually require the holders of such shares to participate in losses of the Company. Accordingly, in periods in which the Company reports a net loss or a net loss attributable to common shareholders resulting from preferred share dividends or accretion, net losses are not allocated to participating securities. The Company reported net losses attributable to common shareholders for each of the years ended December 31, 2011 and 2012, and net income attributable to common shareholders for the year ended December 31, 2013. No net income was attributable to common shareholders for the six months ended June 30, 2013 and 2014 (unaudited).

Basic net income (loss) per share attributable to common shareholders is computed by dividing the net income (loss) attributable to common shareholders by the weighted-average number of common shares outstanding for the period. Diluted net income (loss) attributable to common shareholders is computed by adjusting net income (loss) attributable to common shareholders to reallocate undistributed earnings based on the potential impact of dilutive securities, including outstanding stock options and outstanding subscription rights. Diluted net income (loss) per

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

2. Significant Accounting Policies (continued):

share attributable to common shareholders is computed by dividing the diluted net income (loss) attributable to common shareholders by the weighted-average number of common shares outstanding for the period, including potential dilutive common shares assuming the dilutive effect of outstanding stock options and outstanding subscription rights. For periods in which the Company has reported net losses, diluted net loss per share attributable to common shareholders is the same as basic net loss per share attributable to common shareholders, since dilutive common shares are not assumed to have been issued if their effect is anti-dilutive. For the year ended December 31, 2013, potential common shares of 42,592 were excluded from the calculation of net income per share attributable to common shareholders because their inclusion would be anti-dilutive. As the Company reported net losses attributable to common shareholders for each of the years ended December 31, 2011 and 2012 and no net income was attributable to common shareholders for the six months ended June 30, 2013 and 2014 (unaudited), all stock options were anti-dilutive and were excluded from the diluted weighted average shares for these periods.

(m) Foreign currency translation:

The Company's functional currency is the Canadian dollar and the Company's reporting currency is the U.S. dollar. The Company initially records foreign currency transactions using the exchange rates prevailing at the dates of the transactions. At the balance sheet date, results of operations and cash flows are translated into the functional currency at average exchange rates during the period, and monetary assets and liabilities are translated at end of period exchange rates. Non-monetary assets and liabilities and equity transactions are translated at historical exchange rates. The effects of exchange rate fluctuations on translating foreign currency monetary assets and liabilities into Canadian dollars are included in the statement of operations as foreign exchange gain (loss).

At the balance sheet date, results of operations and cash flows are translated into the U.S. dollar reporting currency at average exchange rates during the period, and assets and liabilities are translated at end of period exchange rates, except for equity transactions, which are translated at historical exchange rates. The effects of exchange rate fluctuations on translating functional currency assets and liabilities into U.S. dollars are accumulated as a separate component in other accumulated comprehensive income (loss) as cumulative translation adjustment.

(n) Income taxes:

Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and net operating loss and credit carryforwards. Deferred tax assets and liabilities are measured at rates expected to apply to taxable income in the years in which those temporary differences and carryforwards are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the statement of operations in the period that includes the enactment date. A valuation allowance is recorded when it is not more likely than not that all or a portion of the net deferred tax assets will be realized.

(o) Deferred tenant inducements:

Deferred tenant inducements, which include leasehold improvements paid for by the landlord and free rent, are recorded as liabilities on the balance sheet and recognized as a reduction of rent expense on a straight-line basis over the term of the lease.

(p) Deferred financing fees:

Deferred financing fees, which primarily consist of direct incremental legal and accounting fees relating to the potential IPO, are capitalized. The deferred financing fees will be offset against IPO proceeds upon the consummation of the offering. In the event the offering is terminated, deferred financing fees will be expensed. At December 31, 2013 and at June 30, 2014 (unaudited), $2,739 and $3,480, respectively, were capitalized and deferred. No amounts were capitalized and deferred as of December 31, 2012.

(q) Comparative figures:

Certain comparative figures have been reclassified to conform with the financial statement presentation adopted for the current period.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

3. Changes in significant accounting policies:

In July 2013, the FASB issued amendments on income tax matters to include explicit guidance on the financial statement presentation of an unrecognized tax benefit when a net operating loss carryforward, a similar tax loss, or a tax credit carryforward exists. The amendments clarify that an unrecognized tax benefit, or a portion of an unrecognized tax benefit, should be presented in the financial statements as a reduction to a deferred tax asset for a net operating loss carryforward, a similar tax loss, or a tax credit carryforward, when the uncertain tax position would reduce the net operating loss carryforward, a similar tax loss, or a tax credit carryforward under the tax law of the applicable jurisdiction, and when the entity intends to use the deferred tax asset for that purpose. These amendments were effective prospectively for fiscal years beginning after December 15, 2013. On January 1, 2014, the Company adopted these amendments. The adoption of these amendments did not have a material impact on the Company's financial position or results of operations.

4. Future changes in accounting policies:

In May 2014, the FASB and International Accounting Standards Board ("IASB") issued amendments to develop a common revenue standard for U.S. GAAP and International Financial Reporting Standards ("IFRS"). These amendments provide the following: a) remove inconsistencies and weaknesses in revenue requirements, b) provide a more robust framework for addressing revenue issues, c) improve comparability of revenue recognition practices across entities, industries, jurisdictions, and capital markets, d) provide more useful information to users of financial statements through improved disclosure requirements, and e) simplify the preparation of financial statements by reducing the number of requirements to which an entity must refer. These amendments will be effective prospectively for annual reporting periods beginning after December 15, 2017, and interim reporting periods within annual reporting periods beginning after December 15, 2018. The Company is in the process of evaluating the impact of the adoption of the amendments on the Company's financial position, results of operations and cash flows.

5. Fair Value of Financial Instruments:

In accordance with the fair value hierarchy described in Note 2(g), the following tables show the fair value of the Company's financial assets that are required to be measured at fair value:

	FAIR VALUE MEASUREMENTS AT DECEMBER 31, 2012			
	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3
Assets				
Cash and cash equivalents	$ 60,162	$ 60,162	$ —	$ —
Total	$ 60,162	$ 60,162	$ —	$ —

	FAIR VALUE MEASUREMENTS AT DECEMBER 31, 2013			
	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3
Assets				
Cash and cash equivalents	$ 37,950	$ 37,950	$ —	$ —
Marketable securities	11,326	11,326	—	—
Total	$ 49,276	$ 49,276	$ —	$ —

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

5. Fair Value of Financial Instruments (continued):

	FAIR VALUE MEASUREMENTS AT JUNE 30, 2014			
	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3
		(unaudited)		
Assets				
Cash and cash equivalents	$ 35,087	$ 35,087	$ —	$ —
Marketable securities	9,623	9,623	—	—
Total	$ 44,710	$ 44,710	$ —	$ —

The Company's Level 1 assets include marketable securities with quoted prices in active markets.

6. Property, Plant and Equipment:

Property, plant and equipment consisted of the following:

	DECEMBER 31,		JUNE 30,
	2012	2013	2014
			(unaudited)
Research equipment	$ 7,354	$ 6,356	$ 6,703
Office furniture and equipment	1,144	1,069	1,066
Computer equipment	1,915	1,780	1,771
Leasehold improvements	7,296	6,825	6,806
Less: accumulated depreciation and amortization	(15,107)	(14,151)	(14,322)
Total	$ 2,602	$ 1,879	$ 2,024

During the year ended December 31, 2012, the Company wrote off leasehold improvements with a net book value of $1,030 in connection with a lease extension and modification agreement made effective April 1, 2012.

Depreciation expense was $1,132, $786 and $705 for the years ended December 31, 2011, 2012 and 2013, respectively, and was $372 and $350 for the six months ended June 30, 2013 and 2014 (unaudited), respectively.

7. Accounts Payable and Accrued Expenses:

Accounts payable and accrued expenses consisted of the following:

	DECEMBER 31,		JUNE 30,
	2012	2013	2014
			(unaudited)
Trade payables	$ 821	$ 391	$ 620
Employee compensation, benefits, and related accruals	1,116	520	626
Consulting and contracted research	107	412	66
Professional fees	93	694	562
Other	44	266	275
Total	$2,181	$2,283	$ 2,149

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

8. Deferred Revenue:

The Company receives upfront payments under various research and collaboration agreements. In assessing the appropriate revenue recognition related to a collaboration agreement, the Company first determines whether an arrangement includes multiple elements, such as the delivery of intellectual property rights and research and development services. Upfront payments are recorded as deferred revenue in the balance sheet and are recognized as collaboration revenue over the estimated period of the research commitment that is consistent with the terms of the research and development obligations contained in the collaboration agreement. The Company periodically reviews the estimated period of performance based on the progress made under each arrangement. The full amount as of December 31, 2013 of $27,806 is expected to be realized as revenue as follows:

YEAR ENDING DECEMBER 31,	
2014	$ 15,920
2015	11,886
Deferred revenue	$ 27,806

9. Note Payable:

In November 2010, the Company entered into a collaboration and licensing agreement with Isis Pharmaceuticals, Inc. (“Isis”) to discover, develop and commercialize antisense drugs that target the hepcidin-hemojuvelin pathway. Upon signing the agreement, the Company issued a convertible promissory note to Isis as payment of an upfront fee of $1,500. The note accrued interest at 5% per annum, compounded annually with interest payable at the time the note became due and payable. At the option of the Company, the note was convertible into equity securities upon occurrence of certain events specified in the note. As the number of equity securities that the note payable was potentially convertible into was variable until the time of conversion, the note was classified as a financial liability and measured at its amortized cost.

At December 31, 2012, the note payable balance was comprised of the principal of $1,500 and accrued interest of $165.

In June 2013, the Company repaid the promissory note in full in cash (together with accrued interest) for $1,701 in conjunction with the exercise of an option to exclusively license certain product rights under the collaboration with Isis.

10. Redeemable Convertible Preferred Shares:

The rights and preferences of the shares of Series A, Series B and Series E convertible preferred shares (collectively, the “Redeemable Convertible Preferred Shares”) are as follows:

Dividends—Holders of Series A, Series B and Series E preferred shares are entitled to receive non-cumulative cash dividends, in preference to any dividend payable on the common shares, at a rate of 8% per annum of the issue price of the preferred share when and as declared by the Board, but only if any dividends are declared on the common shares. In addition, holders of the Series A, Series B and Series E preferred shares will be entitled to receive, when and as declared by the Board, dividends in an amount equal to any dividend per common share declared by the Board on the common shares multiplied by the number of common shares that would be issued in exchange for the Series A, Series B and Series E preferred shares upon conversion.

Conversion—Each Series A, Series B, and Series E preferred share is convertible at any time at the option of the holder into common shares on a 1:1 basis, subject to certain adjustments for share splits, consolidations, share dividends, and, as applicable, following certain capital reorganizations or mergers or acquisitions with another

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

10. Redeemable Convertible Preferred Shares (continued):

company as well as certain adjustments based on whether any common shares have been issued during certain specified time periods at a price per share which is lower than certain threshold amounts as set forth in the articles. Each of the Series A, Series B and Series E preferred shares will automatically convert into common shares in connection with an IPO satisfying certain threshold requirements. The conversion rights associated with each of the Company's Series E preferred shares will increase by 20% if the initial public offering price is below a certain price per share.

As part of a financing of additional Series E preferred shares in 2006, those Series E preferred shares held by shareholders prior to the March 31, 2006 financing received additional conversion rights. Upon 1:1 conversion of such Series E preferred shares to common shares, these conversion rights operate to allow such shareholders to receive an additional number of common shares (such additional number which is equal to the number of conversion rights each holds). As of both December 31, 2013 and June 30, 2014 (unaudited), a total of 327,557 conversion rights are attached to the Company's Series E preferred shares.

Voting—At general meetings of the shareholders, each preferred shareholder is entitled to the number of votes that such shareholder would be entitled to if such preferred shares were converted to common shares. At meetings of the preferred class of shareholders or meetings of any series of the preferred class, each preferred shareholder is entitled to one vote.

Liquidation Preference—Upon the liquidation, dissolution, reorganization or winding-up of the Company, holders of preferred shares are entitled to receive, before any distribution or payment on the common shares, an amount equal to the amount such shareholder paid for such preferred shares, plus all declared, but unpaid, dividends (the "liquidation preference"). In cases where the liquidation preference applied, if there were insufficient funds to pay the full preference value to all holders, then, as a group, the holders of the preferred shares would be paid, ratably. To the extent there were excess assets to distribute, the holders of the preferred shares are entitled to a further distribution ratably along with the common shareholders. Dividends are payable only if and when declared. The Company has not declared any dividends through both December 31, 2013 and June 30, 2014 (unaudited).

Redemption—There are certain redemption rights afforded the Series A, Series B and Series E preferred shares. Such preferred shares have redemption rights in the event of a change of control event such as a merger, acquisition or consolidation of the Company, or in the event of a sale, lease or other disposition of all or substantially all of the assets of the Company. Such events are not solely within the control of the Company, and therefore, the redeemable convertible preferred shares are classified outside of shareholders' deficit.

Retraction—The Company has the right to redeem Series A preferred shares at a redemption price equal to the greater of the fair market value of such Series A preferred share and the amount paid by such shareholder together with an amount equal to the cumulative annual yield calculated since the date of issuance of such shares at the rate of 8% per annum on the amount paid up thereon.

The Company has also authorized 4,620 Series C preferred shares and 9,376 Series D preferred shares. No Series C or D preferred shares are outstanding.

11. Subscription Rights:

At December 31, 2013, the Company had 13,364 (December 31, 2012—11,191) subscription rights outstanding to Genome BC (See Note 14(f)). During the year ended December 31, 2013, 5,602 (2012—6,472, 2011—646) subscription rights were converted by Genome BC to an equal number of common shares.

During the six months ended June 30, 2014, no additional subscription rights were issued to Genome BC and 2,704 subscription rights were converted to an equal number of common shares, thus leaving 10,660 subscription rights outstanding to Genome BC as of June 30, 2014 (unaudited).

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

11. Subscription Rights (continued):

In exchange for research funding provided by Genome BC, the Company agreed to provide Genome BC with subscription rights on a quarterly basis (in arrears) equal to one-half of the Genome BC funding amount divided by the greatest of the following: (i) CAD$51.71; (ii) the converted U.S. dollar share price; and (iii) the most recent issue price of common shares by the Company. The subscription rights are automatically exchangeable into common shares of the Company on a 1:1 basis on a date three years after the subscription right is issued without additional cash consideration being paid by Genome BC. In the event of an IPO, sale or liquidation of the Company, the remaining subscription rights would be automatically exchanged for common shares immediately prior to such event.

12. Stock Option Plan:

The Company has a stock option incentive plan (the “Plan”) that provides for the Company to grant options for the purchase of common shares to directors, officers, employees and service providers, with vesting occurring on a graduated basis over a four-year period or less. Options may be exercised over a term of ten years.

As of December 31, 2012, the Company was authorized to grant up to 1,344,028 options under the Plan. In January 2013, the Plan was amended and restated to increase the maximum number of options under the Plan to 1,517,147. In November 2013, the Plan was further amended and restated to increase the maximum number of options under the Plan to 1,604,938. The Plan is administered by the Company’s board of directors and exercise prices, vesting and other restrictions are all determined at their discretion.

Summary of stock option activity is as follows:

	NUMBER OF OPTIONS	WEIGHTED-AVERAGE		WEIGHTED-AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	AGGREGATE INTRINSIC VALUE U.S.$
		CAD$	U.S.$		
Outstanding, January 1, 2012	1,059,510	4.27	4.22	6.07	
Granted	150,102	3.64	3.64		
Forfeited and expired	(81,175)	5.24	5.24		
Outstanding, December 31, 2012	1,128,437	4.13	4.17	5.81	
Granted	292,413	3.74	3.64		
Exercised	(8,329)	6.07	5.88		37
Forfeited and expired	(79,422)	4.90	4.76		
Outstanding, December 31, 2013	1,333,099	3.98	3.88	5.80	8,300
Granted	157,231	10.78	10.10		
Exercised	(772)	6.07	5.68		4
Forfeited and expired	(46,817)	6.12	5.73		
Outstanding, June 30, 2014 (unaudited)	1,442,741	4.66	4.37	6.05	8,617
Exercisable as of June 30, 2014 (unaudited)	1,034,518	3.88	3.64	4.97	6,922

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

12. Stock Option Plan (continued):

The following table summarizes the stock options outstanding and exercisable at December 31, 2012 and 2013, and June 30, 2014 (unaudited):

	OPTIONS OUTSTANDING				OPTIONS EXERCISABLE		
		WEIGHTED AVERAGE REMAINING OPTION LIFE (YEARS)	WEIGHTED AVERAGE EXERCISE PRICE			WEIGHTED AVERAGE EXERCISE PRICE	
EXERCISE PRICES CAD $	NUMBER OF OPTIONS		CAD $	U.S. $	NUMBER OF OPTIONS	CAD $	U.S. $
December 31, 2012							
2.67	14,043	9.76	2.67	2.67	—	—	—
3.74	906,185	6.76	3.74	3.74	643,682	3.74	3.74
6.07	208,209	1.45	6.07	6.12	208,209	6.07	6.12
	1,128,437	5.81	4.13	4.17	851,891	4.27	4.27
December 31, 2013							
2.67	253,271	9.02	2.67	2.57	5,213	2.67	2.57
3.74	882,247	5.79	3.74	3.64	784,666	3.74	3.64
6.07	154,989	1.11	6.07	5.88	154,989	6.07	5.88
9.76	42,592	9.59	9.76	9.47	—	—	—
	1,333,099	5.8	3.98	3.88	944,868	4.13	4.03
June 30, 2014 (unaudited)							
2.67	252,846	8.54	2.67	2.52	100,681	2.67	2.52
3.74	881,062	5.24	3.74	3.49	820,887	3.74	3.49
6.07	109,924	0.68	6.07	5.68	109,979	6.07	5.68
9.76	42,592	9.09	9.76	9.13	—	—	—
10.78	156,317	9.54	10.78	10.1	2,971	10.78	10.10
	1,442,741	6.05	4.66	4.37	1,034,518	3.88	3.64

A summary of the Company's non-vested stock option activity and related information for the year ended December 31, 2013 and period ended June 30, 2014 (unaudited) is as follows:

	NUMBER OF OPTIONS	WEIGHTED AVERAGE GRANT DATE FAIR VALUE	
		CAD$	U.S.$
Non-vested, January 1, 2013	276,545	2.47	2.47
Granted	292,418	4.27	4.13
Vested	(154,190)	2.57	2.52
Forfeited and cancelled	(26,543)	2.38	2.28
Non-vested, December 31, 2013	388,230	3.79	3.54
Granted	157,231	7.19	6.80
Vested	(134,659)	3.15	2.86
Forfeited and cancelled	(2,579)	4.86	4.42
Non-vested, June 30, 2014 (unaudited)	408,223	5.29	4.95

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

12. Stock Option Plan (continued):

The fair value of each option issued to employees and non-employees is estimated using the Black-Scholes option-pricing model with the following weighted-average assumptions:

	YEARS ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	2011	2012	2013	2013	2014
				(unaudited)	
Average risk-free interest rate	2.36%	1.14%	1.03%	1.03%	1.97%
Average expected term (in years)	6.2	6.2	6.2	6.2	6.2
Expected volatility	70%	70%	70%	70%	74%
Expected dividend yield	—	—	—	—	—
Estimated forfeiture rate	—	—	—	—	—

The weighted-average fair value of options granted during the six months ended June 30, 2013 and 2014 was $4.03 and $6.80 (unaudited), respectively, and the weighted-average fair value of options granted in 2013 was $4.27 (2012—$2.28, 2011—$2.38) per option.

As of June 30, 2014, the unrecognized stock-based compensation expense related to the non-vested stock options was $1,822 (unaudited) (December 31, 2013—$1,155, December 31, 2012—$633), which is expected to be recognized over a weighted-average period of 1.1 years (2013—2.5 years; 2012—2.2 years).

The aggregate fair value of vested options during the six months ended June 30, 2013 and 2014 was $1,095 and $1,751 (unaudited), respectively.

The Company uses the “simplified method” to determine the expected term of options. Under this method, the expected term represents the average of the vesting period and the contractual term.

The expected volatility of share options was estimated based on a historical volatility analysis of peers that were similar to the Company with respect to industry, stage of life cycle, size, and financial leverage. The risk-free interest rate of the options is based on the U.S. Treasury yield curve in effect at the date of grant for a term similar to the expected term of the option.

Stock-based compensation expense is classified in the statements of operations as follows:

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	2011	2012	2013	2013	2014
				(unaudited)	
Research and development	$ 145	$ 112	$ 147	$ 70	$ 96
General and administrative	290	294	428	203	277
Total	$ 435	$ 406	$ 575	$ 273	$ 373

13. Financial Risks:

(a) Foreign Currency Exchange Risk:

At December 31, 2013 and June 30, 2014, the Company had U.S. dollar denominated cash and cash equivalents of $6,365 (December 31, 2012—$51,100) and $8,436, respectively and Canadian denominated cash, cash equivalents and marketable securities of CAD$45,641 (December 31, 2012—CAD$9,000) and $38,703, respectively.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

13. Financial Risks (continued):

The Company faces foreign currency exchange rate risk in part, as a result of entering into transactions denominated in currencies other than Canadian dollars, particularly those denominated in U.S. dollars and Euros. The Company also holds non-Canadian dollar denominated cash, accounts receivable and accounts payable, which are primarily denominated in U.S. dollars.

Changes in foreign currency exchange rates can create significant foreign exchange gains or losses to the Company. The Company's current foreign currency risk is primarily with the U.S. dollar as a majority of its non-Canadian dollar denominated expenses are denominated in U.S. dollars. To limit the Company's exposure to volatility in currency markets, the Company maintains a natural currency hedge against fluctuations in currency exchange rates by estimating its anticipated expenses that will be denominated in currencies other than the Canadian dollar and then purchasing a corresponding amount of the relevant foreign currency at the current spot rate. The Company does not otherwise hedge its exposure and thus assumes the risk of future gains or losses on the amounts of foreign currency held. The impact of an adverse change in foreign exchange rates may be offset in the event the Company receives a milestone payment from a foreign partner.

(b) Interest Rate Risk:

At December 31, 2013 and June 30, 2014, the Company had cash and cash equivalents of $37,950 (December 31, 2012—$60,162) and $44,710, respectively, which consisted of bank deposits. At December 31, 2013, the Company had marketable securities of $11,326 (December 31, 2012—$0). The goals of the Company's investment policy are liquidity and capital preservation; the Company does not enter into investments for trading or speculative purposes and has not used any derivative financial instruments to manage its interest rate exposure. The Company believes that it does not have any material exposure to changes in the fair value of these assets as a result of changes in interest rates due to the short term nature of the Company's cash and cash equivalents. Declines in interest rates, however, would reduce future investment income. Such interest-earning instruments carry a degree of interest rate risk; however, historical fluctuations in interest income have not been significant. The Company had no outstanding debt as of December 31, 2013 and June 30, 2014 (unaudited).

14. Collaboration Agreements:

The Company has entered into a number of collaboration agreements with multiple deliverables under which it may have received non-refundable upfront payments. The Company generally recognizes revenue from upfront payments ratably over the term of its estimated period of performance of research under its collaboration agreements in the event that such arrangements represent a single unit of accounting.

The collaborations may also include contractual milestone payments, which relate to the achievement of pre-specified research, development, regulatory and commercialization events. The milestone events coincide with the progression of product candidates from research and development, to regulatory approval and through to commercialization. The process of successfully discovering a new product candidate, having it selected by the collaborator for development and having it approved and ultimately sold for a profit is highly uncertain. As such, the milestone payments that the Company may earn from its collaborators involve a significant degree of risk to achieve.

Research and development milestones in the Company's collaboration agreements may include the following types of events:

- completion of preclinical research and development work leading to selection of product candidates;
- initiation of Phase 1, Phase 2 or Phase 3 clinical trials; and
- achievement of certain other scientific or development events.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

14. Collaboration Agreements (continued):

Regulatory milestone payments may include the following types of events:

- filing of regulatory applications for marketing approval in the U.S., Europe or Japan, including Investigational New Drug ("IND") applications and New Drug Applications ("NDA"); and
- marketing approval in a major market, such as the U.S., Europe or Japan.

Commercialization milestone payments may include payments triggered by annual product sales that achieve pre-specified thresholds.

(a) uniQure Biopharma B.V. ("uniQure") sublicense and research agreement:
Effective August 2000, the Company entered into a sublicense and research agreement with uniQure (formerly Amsterdam Molecular Therapeutics), pursuant to which the Company granted to uniQure an exclusive, worldwide sublicense under certain intellectual property controlled by the Company to develop and commercialize technology and compounds related to a certain variant of lipoprotein lipase ("LPL"). Under its sublicense and research agreement with uniQure, the Company collaborated with uniQure and the University of British Columbia ("UBC") on preclinical activities, and thereafter uniQure developed an LPL gene therapy product, Glybera, which contains the LPL variant. Glybera was approved in the European Union ("EU") in October 2012 to treat lipoprotein lipase deficiency ("LPLD") in patients with severe or multiple pancreatitis attacks, despite dietary fat restrictions. uniQure conducted the clinical trials and is responsible for the commercialization of Glybera. During the year ended December 31, 2013, the Company received milestone payments of CAD$531. No such milestone payments have been recognized in the six months ended June 30, 2014 (unaudited).

Under the terms of the agreement, the Company is eligible to receive certain additional milestone payments of less than CAD$1,000 for Glybera and for each subsequent product, if any, developed pursuant to the agreement with uniQure. The Company, in turn, has certain payment obligations to its licensor, UBC, based on amounts received from uniQure or otherwise based on the exploitation of the licensed intellectual property. The Company believes that all potential milestone payments under this agreement are substantive and at risk at the inception of this agreement, and, as such, expects that future milestone payments will be recognized as revenue in the period that each milestone is achieved.

The Company is also eligible to receive mid single-digit royalties on net sales of the licensed products, for sales made by uniQure and its affiliates. The royalty rates for sales made by uniQure and its affiliates are reduced to a low single-digit when the licensed patents expire.

In July 2013, uniQure announced that it entered into a partnership with Chiesi Farmaceutici S.p.A. ("Chiesi") for the commercialization of Glybera in the European Union and more than a dozen other countries including Brazil, China, Mexico and Russia. With respect to uniQure's sublicense to Chiesi, the Company is eligible to receive a percentage in the low twenties of all non-royalty compensation relating to the licensed technology or products that uniQure receives from Chiesi (including, for example, upfront payments and milestone payments), a percentage in the low twenties of any royalties that uniQure receives from Chiesi based on sales of technology or products covered by the licensed patents, plus a mid single-digit percentage of certain further royalties that uniQure receives from Chiesi based on sales of the Company's licensed technology or products after the expiration of all licensed patents covering the product. If uniQure grants a sublicense to a third party other than to Chiesi, then the Company is eligible to receive a percentage in the low twenties of all non-royalty compensation relating to the licensed technology or products that uniQure receives from such sublicensee (for example, upfront payments and milestone payments) plus a percentage in the low twenties of any royalties that uniQure receives from such sublicensee based on sales of technology or products covered by the licensed patents.

Pursuant to the terms of the Company's agreement with UBC, the Company must pay to UBC a single-digit percentage of amounts the Company receives from sales of Glybera.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

14. Collaboration Agreements (continued):

(b) Teva Pharmaceutical Industries Ltd. ("Teva") collaborative development and license agreement:

In December 2012, the Company entered into a collaborative development and license agreement with Teva, through its subsidiary, Ivax International GmbH, pursuant to which the Company granted Teva an exclusive worldwide license to develop and commercialize certain products, including TV-45070 (formerly XEN402).

Under the terms of the agreement, Teva paid the Company an upfront fee of $41,000. The Company is collaborating with Teva to further develop TV-45070, and Teva is funding all development costs with respect to the licensed products. Teva is providing funding to the Company for certain of the Company's full-time equivalents ("FTEs") performing the research collaboration plan. The Company identified several deliverables under the agreement with Teva, including exclusive licenses to compounds and non-exclusive licenses to companion diagnostic products, a commitment to participate in a joint steering committee and research and development services to be performed by the Company on behalf of Teva. The Company concluded that the licenses did not have stand-alone value to Teva without the Company's technical expertise and joint steering committee participation during the initial three-year period.

Therefore, the Company has determined that the various deliverables under this agreement should be considered as a single unit of accounting. As such the Company determined that the $41,000 upfront payment should be recognized as revenue ratably over the expected period of performance, being the three-year period ending December 31, 2015.

In addition, the Company is eligible to receive potential milestone payments totaling up to $335,000, comprised of a $20,000 clinical milestone payment, up to $285,000 in regulatory milestone payments, and a $30,000 sales-based milestone payment. If TV-45070 is approved, the Company is also eligible to receive royalties in the low teens to low twenties on net sales of licensed products for the timeframe that such products are covered by the licensed patents and in certain other instances. The Company believes that potential milestone payments for development and regulatory milestones under this agreement are substantive and at risk at the inception of this agreement, and, as such, expects that these future milestone payments will be recognized as revenue in the period that each milestone is achieved. The Company believes that the potential sales-based milestone payments under this agreement are not substantive as the Company does not expect to contribute effort to their achievement and expects such sales-based milestones will generally be achieved after the period of substantial involvement under the collaboration. Therefore, the Company expects that future sales-based contingent consideration milestone payments will be recognized as revenue when such milestones are achieved, assuming all other revenue recognition criteria are met. As of June 30, 2014, no such milestone payments have been recognized (unaudited).

The Company has an option to a 20% to 30% co-promotion interest for products incorporating TV-45070 in the U.S. The Company's exercise of this option is subject to meeting objective financial conditions, staffing requirements and compliance standards to be determined in Teva's reasonable discretion in accordance with standard industry practice. The Company's co-promotion option is exercisable upon the filing of the first NDA for a TV-45070 product with the FDA, and the Company will be obligated to pay an opt-in fee to Teva, which is calculated by multiplying the Company's co-promotion interest (as a percentage) by the amount of certain milestones paid or payable by Teva, to which is added certain past and future development costs incurred by Teva with respect to the product for the U.S. Such opt-in fee is payable as a reduction to the milestone payments or the Company's share of operating profits that Teva would otherwise owe to the Company, or a combination of the two. If the Company exercises this option, the Company will be eligible to receive, in lieu of royalties with respect to such product sales in the U.S., a percentage share (equal to the Company's co-promotion interest) of operating profits from such product sales in the U.S.

Pursuant to the terms of the agreement, the Company has the right to require Teva or an affiliate of Teva, upon written notice, to purchase the Company's common shares issued in the proposed IPO if Teva has commenced a Phase 2b clinical trial of any licensed product under the agreement and if certain minimum price per common share

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

14. Collaboration Agreements (continued):

and gross proceed thresholds are met in connection with the proposed IPO. The number of common shares that Teva or its affiliate would be required to purchase in the proposed IPO upon receipt of such notice would equal to the lesser of:

- $20,000 divided by the initial public offering price of the Company's common shares in the proposed IPO, if the proposed IPO occurs on or after the date Teva commences a Phase 3 clinical trial of any licensed product;
- $10,000 divided by the initial public offering price of the Company's common shares in the proposed IPO, if the proposed IPO occurs prior to the date Teva commences a Phase 3 clinical trial of any licensed product;
- 19% of the Company's issued and outstanding shares after giving effect to the common shares to be issued in the proposed IPO; and
- a number of common shares specified by the Company in a written notice to Teva.

Teva may terminate the agreement upon 60 days advanced written notice to the Company after at least three Phase 2 (or later stage) clinical studies have been completed or in the event that safety or efficacy issues arise in the development of the licensed products. Either party may terminate the agreement in the event of the other's material breach which remains uncured for 90 business days. In certain termination circumstances, the Company receives licenses to Teva intellectual property relating to TV-45070 clinical development and regulatory filings. If patents within such Teva intellectual property cover the TV-45070 product, then Teva is eligible to receive royalties from the Company based on a percentage of net product sales, within the mid single-digit range.

Pursuant to the terms of the Company's agreement with the Memorial University of Newfoundland, the Company must pay to the Memorial University of Newfoundland certain milestone payments, a single-digit percentage of net sales for pain products the Company sells directly and a single-digit percentage of royalties received for sales of pain products by the Company's third party licensees, such as under the Teva and Genentech agreements.

(c) Genentech Inc. ("Genentech") collaborative research and license agreement:

In December 2011, the Company entered into a collaborative research and license agreement with Genentech and its affiliate, F. Hoffman-La Roche Ltd. ("Roche") to discover and develop small and large molecules that selectively inhibit the Nav1.7 sodium channel and companion diagnostics for the potential treatment of pain. Pursuant to this agreement, the Company granted Genentech a worldwide exclusive license to develop and commercialize compounds directed to Nav1.7 and products incorporating such compounds for all uses. The Company also granted Genentech a worldwide non-exclusive license to diagnostic products for the purpose of developing or commercializing such compounds.

Under the terms of the agreement, Genentech paid the Company an upfront fee of $10,000 and a $5,000 milestone payment for the selection of GDC-0276 for development. Genentech is providing funding to the Company for certain of the Company's FTEs performing the research collaboration plan. The Company identified several deliverables under the agreement with Genentech, including exclusive licenses to compounds and non-exclusive licenses to diagnostic products, a commitment to participate in a joint steering committee and research and development services to be performed by the Company on behalf of Genentech. The Company concluded that the licenses did not have stand-alone value to Genentech without the Company's technical expertise and joint steering committee participation during the initial three year period. Therefore, the Company has determined that the various deliverables should be considered as a single unit of accounting. As such the Company determined that the $10,000 upfront payment should be recognized as revenue ratably over the expected period of performance, being the three-year period ending December 22, 2014.

The Company is eligible to receive pre-commercial and commercial milestone payments with respect to the licensed products totaling up to an additional $621,000, comprised of up to $53,500 in preclinical and clinical milestone payments, up to $387,500 in regulatory milestone payments, and up to $180,000 in sales-based milestone

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

14. Collaboration Agreements (continued):

payments for multiple products and indications. In addition, the Company is eligible to receive royalties based on net sales of the licensed products, which range from a mid single-digit percentage to ten percent for small-molecule inhibitors for the timeframe that such products are covered by the licensed patents and a low single-digit percentage thereafter, plus a low single-digit percentage for large-molecule inhibitors of Nav1.7. The Company believes that the potential milestone payments for preclinical, clinical and regulatory milestones under this agreement are substantive and at risk at inception of this agreement, and, as such, expects that these future milestone payments will be recognized as revenue in the period that each milestone is achieved. In the year ended December 31, 2013, a $5,000 milestone payment has been recognized. No such milestone payments have been recognized in the six months ended June 30, 2014 (unaudited).

The Company believes that the potential sales-based milestone payments under this agreement are not substantive as the Company does not expect to contribute effort to their achievement and expects such sales-based milestones will generally be achieved after the period of substantial involvement under the collaboration. Therefore, the Company expects that future sales-based contingent consideration milestone payments will be recognized as revenue when such milestones are achieved, assuming all other revenue recognition criteria are met. As of both December 31, 2013 and June 30, 2014 (unaudited), no such milestone payments have been recognized.

The Company's agreement with Genentech expires on the date of the expiration of all payment obligations to the Company under the agreement. Genentech may terminate the agreement with three months advance notice anytime on or after the third anniversary of the effective date of the agreement, and each party may terminate the agreement in the event of a material breach by the other party that remains uncured for 90 days. In the event that Genentech terminates the agreement due to the Company's breach, Genentech retains its licenses and its payment obligations to the Company are reduced. In the event that the Company terminates the agreement due to Genentech's breach, the rights and licenses granted to Genentech revert back to the Company, subject to certain rights to make and use certain large molecule product candidates that are retained by Genentech, and Genentech is obligated to assign certain regulatory approvals and grant certain licenses to the Company to enable the Company to develop and commercialize certain terminated products outside of the collaboration.

In March 2014, the Company entered into a new agreement with Genentech for pain genetics, using the Company's Extreme Genetics discovery platform to focus on identifying genetic targets associated with rare phenotypes where individuals have an inability to perceive pain or where individuals have non-precipitated spontaneous severe pain. Pursuant to the terms of this agreement, any intellectual property arising out of the collaboration will be jointly owned by the Company and Genentech. The Company also granted Genentech a time-limited, exclusive right of first negotiation on a target-by-target basis to form joint drug discovery collaborations. Under the terms of this agreement, Genentech paid an upfront payment of $1,500. The Company is eligible for an additional $2,000 in milestone payments, and, at the Company's option, a Genentech affiliate will invest up to $5,000 in a private placement concurrent with the potential IPO.

The Company identified several deliverables under this agreement with Genentech, including non-exclusive licenses to certain intellectual property controlled by the Company, a commitment to participate in a joint steering committee and collaborative research services to be performed by the Company. The Company concluded that the licenses did not have stand-alone value to Genentech without the Company's technical expertise and joint steering committee participation during the initial two year period. Therefore, the Company has determined that the various deliverables should be considered as a single unit of accounting. As such the Company determined that the $1,500 upfront payment should be recognized as revenue ratably over the expected period of performance, being the two-year period ending March 18, 2016.

The Company believes that the potential milestone payments under this agreement are substantive and at risk at inception of this agreement, and, as such, expects that these future milestone payments will be recognized as

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(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

14. Collaboration Agreements (continued):

revenue in the period that each milestone is achieved. As of June 30, 2014 (unaudited), no such milestone payments have been recognized.

(d) Isis collaboration and licensing agreement:

In November 2010, the Company entered into a collaboration and license agreement with Isis. The Company issued Isis a convertible, interest-bearing promissory note as payment of the $1,500 upfront fee required by the agreement, which was accounted for as a research and development expense. In June 2013, the Company made this payment to Isis, including accrued interest, pursuant to the terms of the convertible promissory note. Under the terms of this agreement, the Company received an option to obtain from Isis worldwide exclusive licenses to develop and commercialize antisense products targeting hepcidin and/or hemojuvelin, each of which is a validated target for anemia of chronic disease. Antisense products have the potential to treat diseases by binding to and inactivating the messenger RNA of disease-causing genes. The antisense products under this program targeted hepcidin, a liver-derived peptide hormone that regulates iron levels in the body. The option became exercisable upon the initiation of IND-enabling toxicology studies with a development candidate compound. Isis and the Company were responsible for their own costs related to the initial research program that led to the selection of the development candidate compound. During the year ended December 31, 2013, the Company exercised the option. Under the terms of the agreement, the Company paid Isis an option exercise fee of $2,000, which was accounted for as a research and development expense for the period. In the fourth quarter of 2013, the Company discontinued development of product candidates under this program.

The Company may terminate the agreement with Isis upon 90 days' notice to Isis. Either party may terminate the agreement in the event of a material breach by the other party that remains uncured for 60 days. In the first quarter of 2014, the Company provided notice of termination of the agreement to Isis.

(e) Essex Chemie AG (formerly known as Merck Sharp & Dohme GmbH), an affiliate of Merck & Co., Inc. ("Merck"), exclusive collaborative research and option agreement:

In June 2009, the Company entered into an exclusive collaborative research and option agreement with Merck pursuant to which the parties conducted a research program to discover and develop novel small-molecule candidates for the potential treatment of cardiovascular disease. Merck provided payments to the Company for the Company's FTEs who performed the Company's activities pursuant to the research program conducted under the agreement. The Merck collaborative research program ended in December 2012.

In addition, the Company agreed to perform certain genome sequencing work in exchange for a milestone payment of $5,000 payable upon successful conclusion of such work. This payment was made by Merck in February 2010. The Company has determined that this milestone payment was not substantive and should not be considered as a separate element. The Company identified several deliverables under the agreement with Merck, including options to obtain a license, a commitment to participate in a joint steering committee and research and development services to be performed by the Company on behalf of Merck. The Company concluded that the options to license did not have stand-alone value apart from the related research and development services to be delivered. In addition, the Company was unable to estimate a fair value for the undelivered items in the agreement with Merck. Accordingly, the Company has accounted for the deliverables under this agreement as a single unit of accounting.

Under the terms of the agreement, Merck had the option to obtain an exclusive license under certain intellectual property controlled by the Company to develop and commercialize compounds and products directed to targets in the research program, which has now expired. In June 2012, Merck exercised its option and paid the Company $2,000 to obtain such a worldwide exclusive license. The option exercise was determined to be substantive and at risk at the inception of the agreement and, as such, was recognized in the period that the option was exercised by Merck.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

14. Collaboration Agreements (continued):

Under the agreement with Merck, the Company is eligible to receive up to $21,000 in preclinical and clinical milestone payments and up to $43,000 in regulatory milestone payments for products directed to the licensed target, as well as royalties on future product sales at percentages from the mid to high single-digit range. The Company received a milestone payment of $1,000 in 2010 and a milestone payment of $1,000 in 2011 relating to research progress on two separate targets. Both research milestones were determined to be substantive and at risk at the inception of the agreement and, as such, were recognized in the respective period the milestones were achieved. The Company believes that future contingent consideration milestone payments are not considered substantive as the Company is not contributing effort to the achievement of such milestones now that the period of substantial involvement is complete, there are no undelivered elements and no continuing research obligations under this collaboration.

The Company has an option to co-fund Phase 1 and first Phase 2 clinical trials of product candidates licensed by Merck by paying Merck 50% of such development costs. Such co-funding option is available at the IND-filing stage for the applicable product candidate. If the Company exercises its co-funding option, then the maximum eligible milestone amounts due to the Company increase to $86,500, and the royalties increase to the high single-digit to the sub-teen double-digit range. Through both December 31, 2013 and June 30, 2014 (unaudited), the Company has not yet exercised the co-funding option.

The Company's agreement with Merck expires on the date of the expiration of all royalty payment obligations to the Company under the agreement. Merck has the right to terminate the agreement upon providing certain notices to the Company. Each party may terminate the agreement in the event of a material breach by the other party that remains uncured for 90 days after notice of such breach. In the event that Merck terminates the agreement due to the Company's breach, the licenses granted to Merck survive and become fully paid up. In the event that the Company terminates the agreement due to Merck's breach, the licenses granted to Merck terminate.

(f) Genome BC collaboration agreement:

In January 2009, the Company entered into a research funding agreement with Genome BC to co-fund IND-enabling studies for antisense products targeting hepcidin or hemojuvelin. The deliverables of the research activities are to identify development candidates for both hepcidin and hemojuvelin targets. Under the agreement with Genome BC the Company carried out certain research activities with partial funding that Genome BC provided on a quarterly basis over the term of the research program. This agreement expired at the end of its term on September 30, 2013.

Under the research funding agreement, the Company agreed to give to Genome BC at each quarter (and in connection with Genome BC delivering the agreed-upon research funding for that quarter) rights to be issued in the future for a number of the Company's common shares without paying cash consideration, or subscription rights. The number of shares to which Genome BC is entitled under each quarter's subscription rights are proportional to their funding amount paid to the Company for that quarter, calculated by: the quotient of (a) one-half of the Genome BC funding amount to the Company for that quarter divided by (b) the greatest of: (i) CAD$51.71; (ii) the converted U.S. dollar share price; and (iii) the most recent issue price of the Company's common shares. The subscription rights are automatically exchangeable into common shares of the Company on a 1:1 basis on a date three years after the subscription rights are issued without additional cash consideration being paid by Genome BC. However, in the event of a public offering, including an IPO or a sale or liquidation of the Company, Genome BC's remaining subscription rights would automatically convert to common shares immediately prior to such event.

As of December 31, 2013, Genome BC had subscription rights exchangeable for 13,364 (December 31, 2012—11,191) common shares. As of June 30, 2014, 10,660 of such subscription rights remain outstanding (unaudited). See Note 11 for further details.

In the event that a product arising from the research collaboration with Genome BC is the subject of a regulatory filing in any jurisdiction seeking marketing approval to sell such product, then one-half of the total research funding

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

14. Collaboration Agreements (continued):

provided by Genome BC will become repayable by the Company within 60 days of such filing. As of both December 31, 2013 and June 30, 2014 (unaudited), Genome BC had provided $2,410 in research funding to the Company, of which one-half (or $1,205) could be subject to this contingent repayment condition. Given the uncertainty related to such an event and the early stage of development, the Company has determined that it would only be appropriate to recognize the contingent repayment to Genome BC when conditions suggest that such repayment is more likely than not to occur. As of June 30, 2014, the Company determined such an event continues to be unlikely (unaudited).

The following table is a summary of the revenue recognized from the Company's collaborations for each of the years ended December 31, 2011, 2012 and 2013 and for the six months ended June 30, 2013 and 2014:

	YEAR ENDED DECEMBER 31,			SIX MONTHS ENDED JUNE 30,	
	2011	2012	2013	2013	2014
				(unaudited)	
uniQure:					
Milestone payment	$ —	$ 198	$ 531	$ —	$ —
Teva:					
Recognition of upfront payment	—	927	13,143	6,607	6,120
Research funding	—	—	630	294	167
Genentech:					
Recognition of upfront payment	94	3,431	3,300	1,659	1,755
Research funding	93	3,517	4,514	2,257	2,255
Milestone payment	—	—	5,062	—	—
Merck:					
Recognition of initial milestone payment	2,145	1,060	—	—	—
Option fee	—	2,060	—	—	—
Research funding	3,206	2,442	—	—	—
Milestone payment	1,038	—	—	—	—
Genome BC:					
Research funding	339	665	172	168	—
Total collaboration revenue	$6,915	$14,300	$27,352	$10,985	$10,297

15. Commitments and Contingencies:

(a) Lease commitments:

The Company entered into an amended lease agreement for research laboratories and office space in Burnaby, British Columbia, Canada for a 120-month term from April 1, 2012 to March 31, 2022, which included an element of free rent and tenant inducement that will be amortized over the term of the lease.

Lease expense for the year ended December 31, 2013 was $962 (2012—$1,017, 2011—$1,601). Lease expense for the six months ended June 30, 2014 was $433 (2013—$425) (unaudited).

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

15. Commitments and Contingencies (continued):

Future minimum annual lease payments under existing operating lease commitments are as follows:

PERIOD ENDING DECEMBER 31,	
2014	$ 527
2015	1,053
2016	1,053
2017	1,114
2018	1,134
2019 and thereafter	3,687
Total	$ 8,568

(b) Guarantees and indemnifications:

(i) The Company, as permitted under Canadian law and in accordance with its articles and by-laws, will enter into indemnification agreements with each of its officers and directors, and certain other Company employees, and will indemnify such persons for certain events or occurrences, subject to certain limits, while such person is or was serving at the Company's request in such capacity. The term of the indemnification period will last as long as such person may be subject to any proceeding arising out of acts or omissions of such person in such capacity.

The maximum amount of potential future indemnification is unlimited; however, the Company currently holds directors' and officers' liability insurance. This insurance limits the Company's exposure and may enable it to recover a portion of any future amounts paid. The Company believes that the fair value of these indemnification obligations is minimal. Accordingly, the Company has not recognized any liabilities relating to these obligations for any period presented.

(ii) The Company has entered into license and research agreements with third parties that include indemnification provisions that are customary in the industry. These indemnification provisions generally require the Company to compensate the other party for certain damages and costs incurred as a result of third party claims or damages arising from these transactions.

The maximum amount of potential future indemnification is unlimited; however, the Company currently holds commercial and product liability insurance. This insurance limits the Company's exposure and may enable it to recover a portion of any future amounts paid. Historically, the Company has not made any indemnification payments under such agreements and the Company believes that the fair value of these indemnification obligations is minimal. Accordingly, the Company has not recognized any liabilities relating to these obligations for any period presented.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

16. Income Taxes:

Income tax expense (recovery) varies from the amounts that would be computed by applying the expected Canadian and provincial statutory income tax rate of 25.75% (2012–25%, 2011 – 26.5%) to loss before income taxes as shown in the following table:

	2011	2012	2013
Computed taxes at Canadian federal and provincial tax rates	$ (3,178)	$ (1,075)	$ 3,098
Change in valuation allowance	1,910	2,710	(2,029)
Investment tax credits earned	(1,804)	(1,418)	(529)
Tax attributes expired/utilized	2,720	(356)	198
Future tax rate reductions	249	—	(1,019)
Non-deductible expenditures	113	107	(374)
Other reconciling items	(10)	32	655
Income tax expense	$ —	$ —	$ —

Deferred income tax assets and liabilities result from the temporary differences between the amount of assets and liabilities recognized for financial statement and income tax purposes. The significant components of the net deferred income tax assets and liabilities are as follows:

	2012	2013
Deferred income tax assets		
Investment tax credits	$ 19,063	$ 19,833
Scientific research and experimental development pool	17,873	18,592
Deferred revenues	11,663	7,230
Non-capital losses	2,122	2,755
Property, plant and equipment	2,112	2,386
Other	596	604
Less—valuation allowance	(53,429)	(51,400)
Net deferred income tax assets	$ —	$ —

The realization of deferred income tax assets is dependent upon the generation of sufficient taxable income during future periods in which the temporary differences are expected to reverse. The valuation allowance is reviewed on a quarterly basis and if the assessment of the “more likely than not” criteria changes, the valuation allowance is adjusted accordingly. The valuation allowance continues to be applied against deferred income tax assets where the Company has assessed that the realization of such assets does not meet the “more likely than not” criteria.

At December 31, 2013, the Company has unclaimed tax deductions for scientific research and experimental development expenditures of $71,508 (2012—$71,490) with no expiry.

At December 31, 2013, the Company has $17,068 (2012—$16,180) of investment tax credits available to offset federal taxes payable and $7,203 (2012—$6,928) of provincial tax credits available to offset provincial taxes payable in the future.

At December 31, 2013, the Company has non-capital losses carried forward for tax purposes, which are available to reduce taxable income of future years of approximately $10,596 (2012—$8,489).

The investment tax credits and loss carry forwards expire over various years to 2033.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

16. Income Taxes (continued):

As of December 31, 2013, the total amount of the Company's unrecognized tax benefits were $6,350 (2012—$6,350). If recognized in future periods, the unrecognized tax benefits would affect the Company's effective tax rate.

The following table summarizes the activity related to the Company's unrecognized tax benefits:

	2012	2013
Balance as of January 1	$ 1,268	$ 6,350
Increases related to current year positions	5,082	—
Balance as of December 31	$ 6,350	$ 6,350

The Company recognizes potential accrued interest and penalties related to unrecognized tax benefits within the income tax provision. Interest and penalties have not been accrued at December 31, 2013 as none would be owing on the unrecognized tax benefits due to the availability of non-capital losses to shelter any potential taxable income arising thereon.

The Company does not currently expect any significant increases or decreases to these unrecognized tax benefits within 12 months of the reporting date.

The Company currently files an income tax return in Canada, the jurisdiction in which it is subject to tax. In jurisdictions in which the Company does not believe it is subject to tax and therefore does not file income tax returns, the Company can provide no certainty that tax authorities in those jurisdictions will not subject one or more tax years (since the inception of the Company) to examination. Further, while the statute of limitations in each jurisdiction where an income tax return has been filed generally limits the examination period, as a result of loss carry-forwards, the limitation period for examination generally does not expire until several years after the loss carry-forwards are utilized. Other than routine audits by tax authorities for tax credits and tax refunds that the Company claims, the Company is not aware of any other material income tax examination currently in progress by any taxing jurisdiction.

17. Related Parties:

Genworks Inc. ("Genworks"), is controlled by a director of the Company who is the president and principal beneficial shareholder of Genworks. Genworks provides certain scientific consulting services to the Company pursuant to a consulting agreement. The Company did not incur any cash consulting fees to Genworks for the six months ended June 30, 2013 and 2014 (unaudited) and for the year ended December 31, 2013 (2012—$307, 2011—$279).

On January 1, 2012, the Company granted Genworks an option to purchase 10,288 of its common shares at an exercise price of CAD$3.74 per share and on January 1, 2013, the Company granted Genworks an option to purchase 30,864 of its common shares at an exercise price of CAD$2.67 per share. Pursuant to a performance bonus awarded to Genworks in acknowledgment of services conducted prior to September 1, 2012 relating to the Company's sublicense agreement with uniQure, in the event that the Company receives royalty payments from uniQure satisfying certain pre-specified thresholds, Genworks has a right to receive a portion of such royalty payments, totaling up to CAD$600. As of September 1, 2012, no further fees or bonuses are payable to Genworks under such consulting agreement.

No amounts have been accrued as of June 30, 2014 and December 31, 2013 (December 31, 2012—$167) relating to services provided by Genworks.

One of the Company's directors is a former equityholder and former director of Medpace, Inc. ("Medpace"). The Company did not incur any contract research organization fees to Medpace for the six months ended June 30, 2013

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

17. Related Parties (continued):

and 2014 (unaudited) and for the year ended December 31, 2013 (2012 - $151, 2011 - $876). Previously incurred contract research organization fees were paid to Medpace in consideration of certain clinical development services provided by Medpace by individuals other than the Company's director. None of these fees were paid directly to the Company's director. The Company is not currently a party to a consulting agreement with Medpace. No amounts have been accrued as of June 30, 2014 and December 31, 2013 (December 31, 2012 - $0) relating to services provided by Medpace.

18. Subsequent Events:

(a) Milestone payment (unaudited):

In August 2014, the Company received an $8,000 milestone payment under its collaborative research and license agreement with Genentech for the approval of the GDC-0276 Clinical Trial Application from Health Canada. This milestone payment will be recognized as revenue in the third quarter of 2014, the period in which it was achieved.

(b) Share consolidation:

On October 1, 2014, the Company effected a 1 for 4.86 reverse share split of its common and Series A, B and E redeemable convertible preferred shares. At the time of the consolidation, there were no outstanding Series C and D preferred shares and therefore such series were not included in the consolidation. Accordingly, (i) every 4.86 common shares have been combined into one common share, (ii) every 4.86 redeemable Series A, B and E convertible preferred shares have been combined into one redeemable convertible preferred share, (iii) the number of common shares into which each outstanding subscription right is exchangeable into common shares have been proportionately decreased on a 1 for 4.86 basis, (iv) the number of common shares into which each outstanding option to purchase common shares is exercisable have been proportionately decreased on a 1 for 4.86 basis, and (v) the exercise price for each such outstanding option to purchase common shares has been proportionately increased on a 1 for 4.86 basis. All of the share numbers, share prices, and exercise prices in these financial statements have been adjusted, on a retroactive basis, to reflect this 1 for 4.86 reverse share split.

4,000,000 Shares

Common Shares

PRELIMINARY PROSPECTUS

Joint Book-Running Managers

Jefferies
Wells Fargo Securities

Co-Manager

Canaccord Genuity

, 2014

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

Estimated expenses, other than underwriting discounts and commissions, payable by the registrant in connection with the sale of the common shares being registered under this registration statement are as follows.

ITEM	AMOUNT TO BE PAID
SEC Registration Fee	$ 7,066
FINRA Filing Fee	9,125
The NASDAQ Global Market Listing Fee	125,000
Printing and Engraving Expenses	400,000
Legal Fees and Expenses	2,800,000
Accounting Fees and Expenses	615,000
Transfer Agent Fees and Expenses	5,000
Miscellaneous Expenses	338,809
Total	$ 4,300,000

Item 14. Indemnification of Directors and Officers

Under the Canada Business Corporations Act, or CBCA, we may indemnify our current or former directors or officers or any other individuals who act or have acted at our request as a director or officer, or an individual acting in a similar capacity, of another entity, against all costs, charges, and expenses, including an amount paid to settle an action or satisfy a judgment, reasonably incurred by the individual in respect of any civil, criminal, administrative, investigative or other proceeding in which the individual is involved because of his or her association with us or the other entity. The CBCA also provides that we may advance moneys to a director, officer or other individual for costs, charges and expenses reasonably incurred in connection with such a proceeding. The individual shall repay the moneys to us if indemnification of the individual is ultimately prohibited under the CBCA, as described below.

Indemnification is prohibited under the CBCA unless the individual:

- acted honestly and in good faith with a view to our best interests, or the best interests of the other entity for which the individual acted as director or officer or in a similar capacity at our request;
- in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual had reasonable grounds for believing that his or her conduct was lawful; and
- was not judged by the court or other competent authority to have committed any fault or omitted to do anything that the individual ought to have done.

Our by-laws require us to indemnify each of our directors, officers, former directors and officers and persons who act or acted at our request as a director or officer, or in a similar capacity, of a body corporate. We will indemnify such individual against all costs, charges and expenses, including an amount paid to settle an action or proceeding to which the individual is made a party by reason of being or having been a director of officer of us or such body corporate. Our by-laws also require us to, with the approval of a court, indemnify such individual referred to above, in respect of an action by or on behalf of us or such body corporate to procure a judgment in its favor, to which the individual is made a party by reason of being or having been a director or an officer of us or such body corporate, against all costs, charges and expenses reasonably incurred by him in connection with such action. However, we shall not indemnify such individual if the individual did not act honestly and in good faith with a view to our best interests or, in the case of a criminal or administrative action or proceeding that is enforced by a monetary penalty, the individual did not have reasonable grounds for believing that his or her conduct was lawful.

Our by-laws authorize us, with the approval of our board of directors, to purchase and maintain insurance for the benefit of each of our current or former directors or officers and each person who acts or acted at our request as a director or officer of another entity, against any liability incurred by him or her.

We will enter into indemnification agreements with each of our directors and certain officers. As provided by our by-laws, these agreements, among other things, will require us to indemnify each director and officer to the fullest extent permitted by Canadian law, including indemnification of all costs, charges and expenses reasonably incurred by such person in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person's services as a director or officer; provided that, we will not indemnify such individual if, among other things, he or she did not act honestly and in good faith with a view to our best interests and, in the case of a criminal or penal action, the individual did not have reasonable grounds for believing that his or her conduct was lawful.

We expect to have an insurance policy in place prior to the closing of this offering that covers our directors and certain officers, substantially in line with that purchased by similarly situated companies.

Insofar as indemnification of liabilities arising under the Securities Act 1933, as amended, may be permitted to members of our board of directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act of 1933, as amended, and is therefore unenforceable.

We plan to enter into an underwriting agreement which provides that the underwriters are obligated, under certain circumstances, to indemnify our directors and officers against specified liabilities, including liabilities under the Securities Act of 1933, as amended.

Item 15. Recent Sales of Unregistered Securities

The following list sets forth information regarding all unregistered securities sold by us since January 1, 2011, share numbers have not been adjusted for the reverse share split to be effective prior to the closing of this offering. No underwriters were involved in the sales.

(a) From January 1, 2011 through October 3, 2014, we issued an aggregate of 10,571 common shares upon the exercise of stock options granted to certain of our directors, officers, employees and other service providers under our Amended and Restated Stock Option Plan, at exercise prices ranging from CAD$3.74 to CAD$6.08 per common share, for aggregate consideration of CAD$63,144.

(b) From January 1, 2011 through October 3, 2014, we issued an aggregate of 15,883 common shares pursuant to subscription rights issued under a research funding agreement and its predecessor agreement with Genome B.C.

(c) From January 1, 2011 through October 3, 2014 we granted to certain of our directors and officers, stock options under the Amended and Restated Stock Option Plan to purchase an aggregate of 692,929 common shares at exercise prices ranging from CAD$2.67 to CAD$11.23 per common share.

(d) From January 1, 2011 through October 3, 2014 we granted to certain of our non-officer employees and other service providers stock options under the Amended and Restated Stock Option Plan to purchase an aggregate of 152,185 common shares at exercise prices ranging from CAD$2.67 to CAD$11.23 per common share.

(e) From January 1, 2011 through October 3, 2014, we issued to Genome B.C. 13,364 subscription rights, under a research funding agreement and its predecessor agreement, of which 10,201 subscription rights are outstanding. These outstanding subscription rights are automatically convertible into an aggregate of 10,201 common shares upon certain events, including the closing of this offering.

The securities described in Items 15(a) and 15(b) were offered, sold and issued pursuant to the Canadian prospectus exemption under section 2.42 of National Instrument 45-106—*Prospectus and Registration Exemptions*, or NI 45-106, as such securities were offered, sold and issued in accordance with the terms and conditions of securities that we had previously issued. The securities described in Items 15(c) and 15(d) were offered, sold and issued pursuant to the Canadian prospectus exemption under section 2.24 of NI 45-106 as such securities were offered, sold and issued by us to our directors, officers, employees and consultants. The securities described in Items 15(e) were issued pursuant to the Canadian prospectus exemption under section 2.3 of NI 45-106 as such securities were issued to an accredited investor, as such term is defined in NI 45-106.

Any grant of our stock options and any issuance of our common shares upon the exercise of such stock options described Items 15(a), (c) and (d) above that was made to a resident of the U.S. was made pursuant to written compensatory plans or arrangements with our directors, officers, employees and service providers in reliance on the exemption provided by Rule 701 promulgated under Section 3(b) of the Securities Act. All recipients either received adequate information about us or had access, through employment or other relationships, to such information.

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits.

EXHIBIT NUMBER	DESCRIPTION
1.1	Form of Underwriting Agreement.
3.1	Form of Articles of the Company, to be effective upon completion of the offering.
3.2*	Form of Amended and Restated By-laws of the Company, to be effective upon completion of the offering.
4.1	Form of Common Share Certificate.
4.2	Amended and Restated Investor Rights Agreement, dated December 6, 2006, by and among the Company and the investors listed on Exhibit A and Exhibit B thereto, as amended.
5.1	Opinion of McCarthy Tétrault LLP.
10.1†	Exclusive Collaboration Research and Option Agreement, dated June 10, 2009, by and between the Company and Merck Sharp & Dohme Research Ltd, as amended.
10.2†	Sublicense and Research Agreement, dated June 18, 2001, by and between the Company and uniQure Biopharma B.V. (formerly Amsterdam Molecular Therapeutics B.V.), as amended by the Consent of the Company and the University of British Columbia to the uniQure-Chiesi Agreement, dated June 28, 2013.
10.3†	Collaborative Research and License Agreement, dated December 22, 2011, by and among the Company, Genentech, Inc. and F. Hoffmann-La Roche Ltd, as amended.
10.4†	Collaborative Development and License Agreement, dated December 7, 2012, by and between the Company and Ivax International GmbH, as amended.
10.5†	License Agreement, dated August 1, 2000, by and between the Company and the University of British Columbia, as amended.
10.6*	Consulting Agreement, dated January 1, 2004, by and between the Company and Genworks Inc., as amended.
10.7#	Stock Option Plan, as amended, and form of option agreement thereunder.
10.8*#	2014 Equity Incentive Plan, and form of option agreement thereunder.
10.9#	Offer Letter, dated October 3, 2014, by and between the Company and Simon Pimstone.
10.10#	Offer Letter, dated October 3, 2014, by and between the Company and Paul Goldberg.
10.11#	Offer Letter, dated October 3, 2014, by and between the Company and Ian Mortimer.
10.12#	Offer Letter, dated October 3, 2014, by and between the Company and Karen Corraini.
10.13#	Offer Letter, dated October 3, 2014, by and between the Company and Robin Sherrington.
10.14*	Lease, dated as of 2001, by and between the Company and Discovery Parks Incorporated, as amended through July 1, 2014.

EXHIBIT NUMBER	DESCRIPTION
10.15#	Form of Director and Executive Officer Indemnification Agreement.
10.16*	Common Share Put Agreement, dated as of March 19, 2014, by and between the Company and Roche Finance LTD.
21.1*	List of Subsidiaries of the Company.
23.1	Consent of KPMG LLP, Independent Registered Public Accounting Firm.
23.2	Consent of McCarthy Tétrault LLP (included in Exhibit 5.1).
24.1*	Powers of Attorney (included in page II-5 to the original filing of this registration statement).

* Previously filed.
† Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.
# Indicates management contract or compensatory plan.

(b) Financial Statement Schedules.

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Item 17. Undertakings

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended may be permitted to directors, officers and controlling persons of the registrant, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933, as amended and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933, as amended, and will be governed by the final adjudication of such issue.

The undersigned hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, as amended, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act of 1933, as amended, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this amendment to the registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in Burnaby, British Columbia, Canada, on October 6, 2014.

XENON PHARMACEUTICALS INC.

By: /S/ SIMON PIMSTONE
Simon Pimstone
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this amendment to the registration statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
/S/ SIMON PIMSTONE **Simon Pimstone**	President, Chief Executive Officer and Director (Principal Executive Officer)	October 6, 2014
/S/ IAN MORTIMER **Ian Mortimer**	Chief Financial Officer (Principal Financial and Accounting Officer)	October 6, 2014
* **Michael Tarnow**	Chair of the Board of Directors	October 6, 2014
* **Mohammad Azab**	Director	October 6, 2014
* **Johnston Evans**	Director	October 6, 2014
* **Michael Hayden**	Director	October 6, 2014
* **Frank Holler**	Director	October 6, 2014
* **Gary Patou**	Director	October 6, 2014
* **Evan Stein**	Director	October 6, 2014

*By: /S/ SIMON PIMSTONE
Simon Pimstone
Attorney-in-Fact

EXHIBIT INDEX

EXHIBIT NUMBER	DESCRIPTION
1.1	Form of Underwriting Agreement.
3.1	Form of Articles of the Company, to be effective upon completion of the offering.
3.2*	Form of Amended and Restated By-laws of the Company, to be effective upon completion of the offering.
4.1	Form of Common Share Certificate.
4.2	Amended and Restated Investor Rights Agreement, dated December 6, 2006, by and among the Company and the investors listed on Exhibit A and Exhibit B thereto, as amended.
5.1	Opinion of McCarthy Tétrault LLP.
10.1†	Exclusive Collaboration Research and Option Agreement, dated June 10, 2009, by and between the Company and Merck Sharp & Dohme Research Ltd, as amended.
10.2†	Sublicense and Research Agreement, dated June 18, 2001, by and between the Company and uniQure Biopharma B.V. (formerly Amsterdam Molecular Therapeutics B.V.), as amended by the Consent of the Company and the University of British Columbia to the uniQure-Chiesi Agreement, dated June 28, 2013.
10.3†	Collaborative Research and License Agreement, dated December 22, 2011, by and among the Company, Genentech, Inc. and F. Hoffmann-La Roche Ltd, as amended.
10.4†	Collaborative Development and License Agreement, dated December 7, 2012, by and between the Company and Ivax International GmbH, as amended.
10.5†	License Agreement, dated August 1, 2000, by and between the Company and the University of British Columbia, as amended.
10.6*	Consulting Agreement, dated January 1, 2004, by and between the Company and Genworks Inc., as amended.
10.7#	Stock Option Plan, as amended, and form of option agreement thereunder.
10.8*#	2014 Equity Incentive Plan, and form of option agreement thereunder.
10.9#	Offer Letter, dated October 3, 2014, by and between the Company and Simon Pimstone.
10.10#	Offer Letter, dated October 3, 2014, by and between the Company and Paul Goldberg.
10.11#	Offer Letter, dated October 3, 2014, by and between the Company and Ian Mortimer.
10.12#	Offer Letter, dated October 3, 2014, by and between the Company and Karen Corraini.
10.13#	Offer Letter, dated October 3, 2014, by and between the Company and Robin Sherrington.
10.14*	Lease, dated as of 2001, by and between the Company and Discovery Parks Incorporated, as amended through July 1, 2014.
10.15#	Form of Director and Executive Officer Indemnification Agreement.
10.16*	Common Share Put Agreement, dated as of March 19, 2014, by and between the Company and Roche Finance LTD.
21.1*	List of Subsidiaries of the Company.
23.1	Consent of KPMG LLP, Independent Registered Public Accounting Firm.
23.2	Consent of McCarthy Tétrault LLP (included in Exhibit 5.1).
24.1*	Powers of Attorney (included in page II-5 to the original filing of this registration statement).

* Previously filed.

† Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

# Indicates management contract or compensatory plan.

Exhibit 1.1

[—] Shares

Xenon Pharmaceuticals Inc.

UNDERWRITING AGREEMENT

[—], 2014

JEFFERIES LLC
WELLS FARGO SECURITIES, LLC
As Representatives of the several Underwriters

c/o JEFFERIES LLC
520 Madison Avenue
New York, New York 10022

c/o WELLS FARGO SECURITIES, LLC
375 Park Avenue
New York, New York 10152

Ladies and Gentlemen:

Xenon Pharmaceuticals Inc., a corporation continued under the federal laws of Canada (the "**Company**"), proposes to issue and sell to the several underwriters named in Schedule A (the "**Underwriters**") an aggregate of [—] common shares in the capital of the Company (the "**Shares**"). The [—] Shares to be sold by the Company are called the "**Firm Shares**." In addition, the Company has granted to the Underwriters an option to purchase up to an additional [—] Shares as provided in Section 2. The additional [—] Shares to be sold by the Company pursuant to such option are collectively called the "**Optional Shares**." The Firm Shares and, if and to the extent such option is exercised, the Optional Shares are collectively called the "**Offered Shares**." Jefferies LLC ("**Jefferies**") and Wells Fargo Securities, LLC ("**Wells Fargo**") have agreed to act as representatives of the several Underwriters (in such capacity, the "**Representatives**") in connection with the offering and sale of the Offered Shares.

The Company has prepared and filed with the Securities and Exchange Commission (the "**Commission**") a registration statement on Form S-1, File No. 333-198666 which contains a form of prospectus to be used in connection with the public offering and sale of the Offered Shares. Such registration statement, as amended, including the financial statements, exhibits and schedules thereto, in the form in which it became effective under the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder (collectively, the "**Securities Act**"), including any information deemed to be a part thereof at the time of effectiveness pursuant to Rule 430A under the Securities Act, is called the "**Registration Statement**." Any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act in connection with the offer and sale of the Offered Shares is called the "**Rule 462(b) Registration Statement**," and from and after the date and time of filing of any such Rule 462(b) Registration Statement the term "Registration Statement" shall include the Rule 462(b) Registration Statement. The prospectus, in the form first used by the Underwriters to confirm sales of the Offered Shares or in the form first made available to the Underwriters by the Company to meet requests of purchasers pursuant to Rule 173 under the Securities Act, is called the "**Prospectus**." The preliminary prospectus included in the Registration Statement immediately prior to effectiveness describing the Offered Shares and the offering thereof is called the "**Preliminary Prospectus**," and the Preliminary Prospectus and any other prospectus in preliminary form that describes the Offered Shares and the offering

thereof and is used prior to the filing of the Prospectus is called a "**preliminary prospectus**." As used herein, "**Applicable Time**" is [—][a.m.][p.m.] (New York City time) on [—], 2014. As used herein, "**free writing prospectus**" has the meaning set forth in Rule 405 under the Securities Act, and "**Time of Sale Prospectus**" means the Preliminary Prospectus together with the free writing prospectuses, if any, identified in Schedule B hereto and the pricing information set forth on Schedule B hereto. As used herein, **"Road Show"** means a "road show" (as defined in Rule 433 under the Securities Act) relating to the offering of the Offered Shares contemplated hereby that is a "written communication" (as defined in Rule 405 under the Securities Act). As used herein, "**Section 5(d) Written Communication**" means each written communication (within the meaning of Rule 405 under the Securities Act) that is made in reliance on Section 5(d) of the Securities Act by the Company or any person authorized to act on behalf of the Company to one or more potential investors that are qualified institutional buyers ("**QIBs**") and/or institutions that are accredited investors ("**IAIs**"), as such terms are respectively defined in Rule 144A and Rule 501(a) under the Securities Act, to determine whether such investors might have an interest in the offering of the Offered Shares; "**Section 5(d) Oral Communication**" means each oral communication, if any, made in reliance on Section 5(d) of the Securities Act by the Company or any person authorized to act on behalf of the Company made to one or more QIBs and/or one or more IAIs to determine whether such investors might have an interest in the offering of the Offered Shares; and "**Permitted Section 5(d) Communication**" means the Section 5(d) Written Communication(s) listed on Schedule C attached hereto.

Pursuant to the Canadian securities laws and the rules, regulations and national, multilateral or local instruments and published policy statements applicable in each of British Columbia, Alberta and Ontario (the "**Qualifying Jurisdictions**"), including the rules and procedures established pursuant to National Instrument 41-101 – *General Prospectus Requirements* (the "**Canadian Securities Laws**"), the Company has prepared and filed with the British Columbia Securities Commission ("**BCSC**"), as principal regulator pursuant to Multilateral Instrument 11-201 – *Passport System* and National Policy 11-202 – *Process for Prospectus Reviews in Multiple Jurisdictions* (together, the "**Passport System**"), and with the securities regulatory authorities in each of Alberta and Ontario (together with the BCSC, the "**Qualifying Authorities**") (i) a preliminary long-form prospectus (the "**Canadian Preliminary Prospectus**") and (ii) a final long-form prospectus (the "**Canadian Final Prospectus**" and together with the Canadian Preliminary Prospectus, the "**Canadian Prospectus**"), to become a reporting issuer in British Columbia, Alberta and Ontario under the Canadian Securities Laws and to qualify the distribution of the Offered Shares under the Canadian Securities Laws; the BCSC has issued a prospectus receipt under the Passport System for each of the Canadian Preliminary Prospectus and the Canadian Final Prospectus.

All references in this Agreement to (i) the Registration Statement, any preliminary prospectus (including the Preliminary Prospectus), or the Prospectus, or any amendments or supplements to any of the foregoing, or any free writing prospectus, shall include any copy thereof filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System ("**EDGAR**"), (ii) the Prospectus shall be deemed to include any "electronic Prospectus" provided for use in connection with the offering of the Offered Shares as contemplated by Section 3(o) of this Agreement and (iii) the Canadian Prospectus (and any amendments or supplements thereto) shall include any copy thereof filed with the Qualifying Authorities pursuant to the System for Electronic Document Analysis and Retrieval ("**SEDAR**").

The Company hereby confirms its respective agreements with the Underwriters as follows:

Section 1. Representations and Warranties of the Company. The Company hereby represents, warrants and covenants to each Underwriter, as of the date of this Agreement, as of the First Closing Date (as hereinafter defined) and as of each Option Closing Date (as hereinafter defined), if any, as follows:

(a) ***Compliance with Registration Requirements*****.** The Registration Statement has become effective under the Securities Act. The Company has complied to the Commission's satisfaction with all requests of the Commission for additional or supplemental information, if any. No stop order suspending the effectiveness of the Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the knowledge of the Company, are contemplated or threatened by the Commission.

(b) ***Disclosure*****.** Each preliminary prospectus and the Prospectus when filed complied in all material respects with the Securities Act and, if filed by electronic transmission pursuant to EDGAR, was identical (except as may be permitted by Regulation S-T under the Securities Act) to the copy thereof delivered to the Underwriters for use in connection with the offer and sale of the Offered Shares. Each of the Registration Statement and any post-effective amendment thereto, at the time it became or becomes effective, complied and will comply in all material respects with the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the Applicable Time, the Time of Sale Prospectus (including any preliminary prospectus wrapper) did not, and at the First Closing Date (as defined in Section 2) and at each applicable Option Closing Date (as defined in Section 2), will not, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Prospectus (including any Prospectus wrapper), as of its date, did not, and at the First Closing Date and at each applicable Option Closing Date, will not, contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the three immediately preceding sentences do not apply to statements in or omissions from the Registration Statement or any post-effective amendment thereto, or the Prospectus or the Time of Sale Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with written information relating to any Underwriter furnished to the Company in writing by the Representatives expressly for use therein, it being understood and agreed that the only such information consists of the information described in Section 9(b) below. There are no contracts or other documents required to be described in the Time of Sale Prospectus or the Prospectus or to be filed as an exhibit to the Registration Statement which have not been described or filed as required.

The Canadian Prospectus, as of the time of filing thereof, complied (and any amendments or supplements thereto will comply) in all material respects with the applicable requirements of Canadian Securities Laws; the Canadian Prospectus, as of the time of filing thereof (and any amendments or supplements thereto), did not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading; and the Canadian Prospectus, as of the time of filing thereof (and any amendments or supplements thereto), constituted full, true and plain disclosure of all material facts relating to the Offered Shares and to the Company; provided, however, that the Company makes no representations or warranties as to the information contained in or omitted from the Canadian Prospectus (and any amendments or supplements thereto) in reliance upon and in conformity with information furnished in writing to the Company by or on behalf of any Underwriter through the Representatives specifically for inclusion in the Canadian Prospectus (and any amendments or supplements thereto).

(c) ***Free Writing Prospectuses; Road Show*****.** As of the determination date referenced in Rule 164(h) under the Securities Act, the Company was not, is not or will not be (as applicable) an "ineligible issuer" in connection with the offering of the Offered Shares pursuant to Rules 164, 405 and 433 under the Securities Act. Each free writing prospectus that the Company is required to file pursuant to Rule 433(d) under the Securities Act has been, or will be, filed with the Commission in accordance with the requirements of the Securities Act. Each free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) under the Securities Act or that was prepared by or on behalf of or used or referred to by the Company complies or will comply in all material respects with the requirements of Rule 433 under the Securities Act, including timely filing with the Commission or retention where required and legending, and each such free writing prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Offered Shares did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, the Prospectus or any preliminary prospectus and not superseded or modified. Except for the free writing prospectuses, if any, identified in Schedule B, and electronic road shows, if any, furnished to you before first use, the Company has not prepared, used or referred to, and will not, without your prior written consent, prepare, use or refer to, any free writing prospectus. Each Road Show, when considered together with the Time of Sale Prospectus, did not, as of the Applicable Time, contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(d) ***Distribution of Offering Material By the Company*****.** Prior to the later of (i) the expiration or termination of the option granted to the several Underwriters in Section 2, (ii) the completion of the Underwriters' distribution of the Offered Shares and (iii) the expiration of 25 days after the date of the Prospectus, the Company has not distributed and will not distribute any offering material in connection with the offering and sale of the Offered Shares other than the Registration Statement, the Time of Sale Prospectus, the Prospectus, the Canadian Prospectus or any free writing prospectus reviewed and consented to by the Representatives, the free writing prospectuses, if any, identified on Schedule B hereto and any Permitted Section 5(d) Communications.

(e) ***The Underwriting Agreement.*** This Agreement has been duly authorized, executed and delivered by the Company.

(f) ***Authorization of the Offered Shares*****.** The Offered Shares have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company against payment therefor pursuant to this Agreement, will be validly issued, fully paid and non-assessable, and the issuance and sale of the Offered Shares is not subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase the Offered Shares.

(g) ***No Applicable Registration or Other Similar Rights.*** There are no persons with registration or other similar rights to have any equity or debt securities registered for sale under the Registration Statement or included in the offering contemplated by this Agreement, except for such rights as have been duly waived.

(h) ***No Material Adverse Change*****.** Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus, subsequent to the respective dates as of which information is given in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus: (i) there has been no material adverse change,

or any development that could reasonably be expected to result in a material adverse change, in the condition, financial or otherwise, or in the earnings, business, properties, operations, assets, liabilities or prospects, whether or not arising from transactions in the ordinary course of business, of the Company (any such change being referred to herein as a "**Material Adverse Change**"); (ii) the Company has not incurred any material liability or obligation, indirect, direct or contingent, including without limitation any losses or interference with its business from fire, explosion, flood, earthquakes, accident or other calamity, whether or not covered by insurance, or from any strike, labor dispute or court or governmental action, order or decree, that are material, individually or in the aggregate, to the Company or has entered into any transactions not in the ordinary course of business; and (iii) there has not been any material decrease in the share capital or any material increase in any short-term or long-term indebtedness of the Company and there has been no dividend or distribution of any kind declared, paid or made by the Company or any repurchase or redemption by the Company of any class of share capital.

(i) ***Independent Accountants*****.** KPMG LLP, which has expressed its opinion with respect to the financial statements (which term as used in this Agreement includes the related notes thereto) filed with the Commission and the Qualifying Authorities, as applicable, as a part of the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus, is (i) an independent registered public accounting firm as required by the Securities Act and the rules of the Public Company Accounting Oversight Board ("**PCAOB**"), (ii) in compliance with the applicable requirements relating to the qualification of accountants under Rule 2-01 of Regulation S-X under the Securities Act, (iii) a registered public accounting firm as defined by the PCAOB whose registration has not been suspended or revoked and who has not requested such registration to be withdrawn and (iv) independent within the meaning of Canadian Securities Laws.

(j) ***Financial Statements*****.** The financial statements filed with the Commission as a part of the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus present fairly in all material respects the financial position of the Company as of the dates indicated and the results of its operations, changes in shareholders' equity and cash flows for the periods specified. Such financial statements have been prepared in conformity with generally accepted accounting principles as applied in the United States applied on a consistent basis throughout the periods involved, except as may be expressly stated in the related notes thereto and except unaudited financial statements, which are subject to normal year-end adjustment and do not contain certain footnotes as permitted by the applicable rules of the Commission. No other financial statements or supporting schedules are required to be included in the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus. The financial data set forth in each of the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus under the captions "Prospectus Summary—Summary Financial Data," "Selected Financial Data" and "Capitalization" fairly present in all material respects the information set forth therein on a basis consistent with that of the audited financial statements contained in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus. All disclosures contained in the Registration Statement, any preliminary prospectus, the Prospectus or the Canadian Prospectus and any free writing prospectus, that constitute non-GAAP financial measures (as defined by the rules and regulations under the Securities Act and the Exchange Act of 1934, as amended (the "**Exchange Act**")) comply in all material respects with Regulation G under the Exchange Act and Item 10 of Regulation S-K under the Securities Act, as applicable. To the Company's knowledge, no person who has been suspended or barred from being associated with a registered public accounting firm, or who has failed to comply with any sanction pursuant to Rule 5300 promulgated by the PCAOB, has participated in or otherwise aided the preparation of, or audited, the financial statements, supporting schedules or other financial data filed with the Commission as a part of the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus.

(k) ***Company's Accounting System*****.** The Company makes and keeps accurate books and records and maintains a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles as applied in the United States and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

(l) ***Disclosure Controls and Procedures; Deficiencies in or Changes to Internal Control Over Financial Reporting*****.** The Company has established and maintains disclosure controls and procedures (as defined in Rules 13a-15 and 15d-15 under the Exchange Act), which (i) are designed to ensure that material information relating to the Company, is made known to the Company's principal executive officer and its principal financial officer by others within those entities, particularly during the periods in which the periodic reports required under the Exchange Act are being prepared; (ii) have been evaluated by management of the Company for effectiveness as of the end of the Company's most recent fiscal quarter; and (iii) are effective in all material respects at the reasonable assurance level to perform the functions for which they were established. Since the end of the Company's most recent audited fiscal year, there have been no significant deficiencies or material weakness in the Company's internal control over financial reporting (whether or not remediated) and no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting. The Company is not aware of any change in its internal control over financial reporting that has occurred during its most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(m) ***Incorporation and Good Standing of the Company*****.** The Company has been duly continued and is validly existing as a corporation in good standing under the *Canada Business Corporations Act* and is up-to-date in all material corporate filings and has the corporate power and capacity to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus and to enter into and perform its obligations under this Agreement.

(n) ***Subsidiaries*****.** The Company does not own or control, directly or indirectly, any corporation, association or other entity.

(o) ***Capitalization and Other Share Capital Matters*****.** The authorized, issued and outstanding share capital of the Company is as set forth in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus under the caption "Capitalization" (other than for subsequent issuances, if any, pursuant to employee benefit plans, or upon the exercise of outstanding options, warrants or rights, in each case as described in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus). The attributes of the Shares (including the Offered Shares) are consistent in all material respects to the description thereof contained in the Time of Sale Prospectus and the Canadian Prospectus. All of the issued and outstanding Shares have been duly authorized and validly issued, are fully paid and non-assessable and have been issued in compliance, in all material respects, with all U.S. and Canadian federal, state, provincial and local securities laws. None of the outstanding Shares was issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any share capital of the Company other than those described in the Registration Statement, the Time of Sale Prospectus, the

Prospectus and the Canadian Prospectus. The descriptions of the Company's stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, set forth in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus accurately and fairly presents in all material respects the information required to be shown with respect to such plans, arrangements, options and rights.

(p) ***Stock Exchange Listing*****.** The Offered Shares have been approved for listing on The NASDAQ Global Market (the "***NASDAQ***"), subject only to official notice of issuance.

(q) ***Non-Contravention of Existing Instruments; No Further Authorizations or Approvals Required*****.** The Company is not in violation of its articles of continuance or by-laws, or is in default (or, with the giving of notice or lapse of time, would be in default) ("**Default**") under any indenture, loan, credit agreement, note, lease, license agreement, contract, franchise or other instrument (including, without limitation, any pledge agreement, security agreement, mortgage or other instrument or agreement evidencing, guaranteeing, securing or relating to indebtedness) to which the Company is a party or by which it may be bound, or to which any of its properties or assets are subject (each, an "**Existing Instrument**"), except for such Defaults as could not reasonably be expected, individually or in the aggregate, to have a material adverse effect on the condition (financial or otherwise), earnings, business, properties, operations, assets, liabilities or prospects of the Company (a "**Material Adverse Effect**"). The Company's execution, delivery and performance of this Agreement, consummation of the transactions contemplated hereby and by the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus and the issuance and sale of the Offered Shares (including the use of proceeds from the sale of the Offered Shares as described in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus under the caption "Use of Proceeds") (i) have been duly authorized by all necessary corporate action and will not result in any violation of the provisions of the articles of continuance or by-laws of the Company, (ii) will not conflict with or constitute a breach of, or Default or a Debt Repayment Triggering Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to, or require the consent of any other party to, any Existing Instrument and (iii) will not result in any violation of any law, administrative regulation or administrative or court decree applicable to the Company, except for such conflicts, breaches, Defaults or Debt Repayment Triggering Events or liens, charges, encumbrances or violations specified in subsection (ii) and (iii) above that could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. No consent, approval, authorization or other order of, or registration or filing with, any court or other governmental or regulatory authority or agency, is required for the Company's execution, delivery and performance of this Agreement and consummation of the transactions contemplated hereby and by the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus, except such as have been obtained or made by the Company and are in full force and effect under the Securities Act, the Canadian Securities Laws and such as may be required under applicable state securities or blue sky laws, Industry Canada, FINRA or NASDAQ. As used herein, a "**Debt Repayment Triggering Event**" means any event or condition which gives, or with the giving of notice or lapse of time would give, the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company.

(r) ***Compliance with Laws.*** The Company has been and is in compliance with all applicable laws, rules and regulations, except where failure to be so in compliance could not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

(s) ***No Material Actions or Proceedings*****.** There is no action, suit, proceeding, inquiry or investigation brought by or before any governmental entity now pending or, to the knowledge of the

Company, threatened, against or affecting the Company, which could reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect or materially and adversely affect the consummation of the transactions contemplated by this Agreement or the performance by the Company of its obligations hereunder; and the aggregate of all pending legal or governmental proceedings to which the Company is a party or of which any of its properties or assets is the subject, including ordinary routine litigation incidental to the business, if determined adversely to the Company, could not reasonably be expected to have a Material Adverse Effect. No material labor dispute with the employees of the Company, or with the employees of any principal supplier, manufacturer, customer or contractor of the Company, exists or, to the knowledge of the Company, is threatened or imminent.

(t) ***Intellectual Property Rights*****.** Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus, the Company owns, or has obtained valid and enforceable licenses for all inventions, patent applications, patents, trademarks, trade names, service names, copyrights, trade secrets and other intellectual property described in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus as being owned or licensed by them or which are necessary in all material respects for the conduct of its business as currently conducted or as currently proposed to be conducted (collectively, "**Intellectual Property**"). To the Company's knowledge, except as could not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect: (i) there are no third parties who have rights to any Intellectual Property, except for customary reversionary rights of third-party licensors or co-ownership rights with respect to Intellectual Property that are disclosed in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus as being subject to a third party's joint ownership interest or as being licensed to the Company; and (ii) there is no infringement by third parties of any Intellectual Property. Except as could not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the Company's rights in or to any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; (B) challenging the validity, enforceability or scope of any Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim; or (C) asserting that the Company infringes or otherwise violates, or would, upon the commercialization of any product or service described in the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus as under development, infringe or violate, any patent, trademark, trade name, service name, copyright, trade secret or other proprietary rights of others, and the Company is unaware of any facts which would form a reasonable basis for any such action, suit, proceeding or claim. The Company has complied in all material respects with the terms of each agreement pursuant to which Intellectual Property has been licensed to the Company, and all such agreements are in full force and effect as to the Company and to the Company's knowledge as to the other parties to such agreements. Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus, the product candidates described in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus as under development by the Company fall within the scope of the claims of one or more patents or patent applications owned by, or exclusively licensed to, the Company.

(u) ***All Necessary Permits, etc*****.** The Company possesses such valid and current certificates, authorizations or permits required by state, federal, provincial or foreign regulatory agencies or bodies to conduct its business as currently conducted and as described in the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus ("**Permits**"), except where the failure to so possess could not reasonably be expected to, individually or in the aggregate, have a Material Adverse Effect. The Company is not in violation of, or in default under, any of the Permits, except for such violations or defaults as could not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, and has not received any notice of proceedings relating to the revocation or

modification of, or non-compliance with, any such certificate, authorization or permit, which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to, individually or in the aggregate, result in a Material Adverse Effect.

(v) ***Title to Properties*****.** Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus, the Company has good and marketable title to all of the real and personal property and other assets reflected as owned in the financial statements referred to in Section 1(j) above (or elsewhere in the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus), in each case free and clear of any security interests, mortgages, liens, encumbrances, equities, adverse claims and other defects except such as do not, individually or in the aggregate, materially affect the value of such property and do not interfere with the use made and proposed to be made of such property by the Company. The real property, improvements, equipment and personal property held under lease by the Company are held under valid and enforceable leases, with such exceptions as are not material and do not materially interfere with the use made or proposed to be made of such real property, improvements, equipment or personal property by the Company.

(w) ***Tax Law Compliance*****.** The Company has filed all material federal, state, provincial and foreign income and franchise tax returns required to be filed by it or has properly requested extensions thereof and has paid all taxes required to be paid by it and, if due and payable, any related or similar assessment, fine or penalty levied against it except as may be being contested in good faith and by appropriate proceedings. The Company has made adequate charges, accruals and reserves in the applicable financial statements referred to in Section 1(j) above in respect of all federal, state, provincial and foreign income and franchise taxes for all periods as to which the tax liability of the Company has not been finally determined. No transaction, stamp, capital or other issuance, registration, transaction, transfer or withholding tax or duty (in the case of such withholding tax, only to the extent that no services were rendered in Canada by or on behalf of any Underwriter which is not a resident of Canada for the purposes of the *Income Tax Act* (Canada)) is payable in Canada by or on behalf of the Underwriters to the Government of Canada or the Government of British Columbia or any political subdivision thereof or any authority or agency thereof or therein having the power to tax in connection with (i) the issuance, sale and delivery of the Offered Shares by the Company to or for the account of the Underwriters; (ii) the purchase from the Company, and the initial sale and delivery by the Underwriters of the Offered Shares to purchasers thereof; or (iii) the execution and delivery of this Agreement or any other document to be furnished hereunder.

(x) ***Insurance*****.** The Company is insured by recognized, financially sound and reputable institutions with policies in such amounts and with such deductibles and covering such risks as the Company reasonably believes are generally deemed adequate and customary for companies engaged in similar businesses including, but not limited to, policies covering real and personal property owned or leased by the Company against theft, damage, destruction, acts of vandalism and earthquakes and policies covering the Company for product liability claims and clinical trial liability claims. The Company has no reason to believe that it will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that could not reasonably be expected to have a Material Adverse Effect. The Company has not been denied any insurance coverage which it has sought or for which it has applied.

(y) ***Compliance with Environmental Laws*****.** Except as could not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect: (i) the Company is not in violation of any federal, state, provincial, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or

administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products (collectively, "**Hazardous Materials**") or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, "**Environmental Laws**"); (ii) the Company has all permits, authorizations and approvals required under any applicable Environmental Laws and is in compliance with their requirements; (iii) there are no pending or, to the knowledge of the Company, threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company; and (iv) to the knowledge of the Company, there are no events or circumstances existing as of the date hereof that might reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental body or agency, against or affecting the Company relating to Hazardous Materials or any Environmental Laws.

(z) ***Periodic Review of Costs of Environmental Compliance*****.** There are no costs and liabilities related to Environmental Laws (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or any permit, license or approval, any related constraints on operating activities and any potential liabilities to third parties) that have come to the Company's attention that could reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

(aa) ***ERISA Compliance*****.** The Company and any "employee benefit plan" (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, "**ERISA**")) established or maintained by the Company or its "ERISA Affiliates" (as defined below) are in compliance in all material respects with ERISA. "**ERISA Affiliate**" means, with respect to the Company, any member of any group of organizations described in Sections 414(b), (c), (m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the "**Code**") of which the Company is a member. No "reportable event" (as defined under ERISA) has occurred or is reasonably expected to occur with respect to any "employee benefit plan" established or maintained by the Company or any of its ERISA Affiliates. No "employee benefit plan" established or maintained by the Company or any of its ERISA Affiliates, if such "employee benefit plan" were terminated, would have any "amount of unfunded benefit liabilities" (as defined under ERISA). Neither the Company nor any of its ERISA Affiliates has incurred or reasonably expects to incur (i) any liability under Title IV of ERISA with respect to termination of, or withdrawal from, any "employee benefit plan", (ii) any liability under Sections 412 or 4971 of the Code or (iii) any material liability under Section 4975 or 4980B of the Code. Each employee benefit plan established or maintained by the Company or any of its ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and nothing has occurred, whether by action or failure to act, which would cause the loss of such qualification.

(bb) ***Company Not an "Investment Company"; Not a "Passive Foreign Investment Company".*** The Company is not, and will not be, either after receipt of payment for the Offered Shares or after the application of the proceeds therefrom as described under "Use of Proceeds" in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus, required to register as an "investment company" under the Investment Company Act of 1940, as amended (the **"Investment Company Act")**. The Company does not believe that it was characterized as a "passive foreign investment company," as such term is defined in the Code in 2013 and does not expect to be a "passive foreign investment company" in 2014, including after receipt of payment for the Offered Shares or after the application of the proceeds therefrom as described under "Use of Proceeds" in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus.

(cc) ***No Price Stabilization or Manipulation; Compliance with Regulation M*****.** The Company has not taken, directly or indirectly, any action designed to or that might reasonably be expected to cause or result in stabilization or manipulation of the price of the Shares or of any "reference security" (as defined in Rule 100 of Regulation M under the Exchange Act (**"Regulation M"**)) with respect to the Shares, whether to facilitate the sale or resale of the Offered Shares or otherwise, and has taken no action which would directly or indirectly violate Regulation M.

(dd) ***Related-Party Transactions*****.** There are no business relationships or related-party transactions involving the Company or any other person required to be described in the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus that have not been described as required.

(ee) ***FINRA Matters*****.** All of the information provided to the Underwriters or to counsel for the Underwriters related to FINRA matters by the Company and its officers and directors is true, complete and correct in all material respects.

(ff) ***Parties to Lock-Up Agreements*****.** The Company has furnished to the Underwriters a letter agreement in the form attached hereto as Exhibit B (the "**Lock-up Agreement**") from each of the directors, officers and from the holders of [96]% of the outstanding equity securities of the Company.

(gg) ***Statistical and Market-Related Data*****.** All statistical, demographic and market-related data included in the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate in all material respects. To the extent required, the Company has obtained the written consent to the use of such data from such sources.

(hh) ***No Unlawful Contributions or Other Payments.*** Neither the Company nor, to the Company's knowledge, any employee or agent of the Company, has made any contribution or other payment to any official of, or candidate for, any federal, state or foreign office in violation of any law or of the character required to be disclosed in the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus.

(ii) ***Foreign Corrupt Practices Act.*** Neither the Company nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company has, in the course of its actions for, or on behalf of, the Company (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made any direct or indirect unlawful payment to any domestic government official, "foreign official" (as defined in the U.S. Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (collectively, the "**FCPA**")) or employee from corporate funds; (iii) violated or is in violation of any applicable provision of the FCPA or any applicable non-U.S. anti-bribery statute or regulation; or (iv) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any domestic government official, such foreign official or employee; and the Company and, to the knowledge of the Company, the Company's affiliates have conducted their business in compliance with the applicable provisions of the FCPA and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(jj) ***Money Laundering Laws*****.** The operations of the Company are, and have been conducted at all times, in compliance with applicable financial recordkeeping and reporting requirements of the

Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "**Money Laundering Laws**") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(kk) ***OFAC.*** Neither the Company nor, to the knowledge of the Company, any director, officer, agent, employee, affiliate or person acting on behalf of the Company is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("**OFAC**"); and the Company will not directly or indirectly use the proceeds of this offering, or lend, contribute or otherwise make available such proceeds to any subsidiary, or any joint venture partner or other person or entity, for the purpose of financing the activities of or business with any person, or in any country or territory, that currently is subject to any U.S. sanctions administered by OFAC or in any other manner that will result in a violation by any person (including any person participating in the transaction whether as underwriter, advisor, investor or otherwise) of U.S. sanctions administered by OFAC.

(ll) ***Brokers.*** Except pursuant to this Agreement, there is no broker, finder or other party that is entitled to receive from the Company any brokerage or finder's fee or other fee or commission as a result of any transactions contemplated by this Agreement.

(mm) ***Forward-Looking Statements.*** Each financial or operational projection or other "forward-looking statement" (as defined by Section 27A of the Securities Act or Section 21E of the Exchange Act) contained in the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus (i) was so included by the Company in good faith and with reasonable basis after due consideration by the Company of the underlying assumptions, estimates and other applicable facts and circumstances and (ii) is accompanied by meaningful cautionary statements identifying those factors that could reasonably be expected to cause actual results to differ materially from those in such forward-looking statement. No such statement was made with the knowledge of an executive officer or director of the Company that it was false or misleading.

(nn) ***No Outstanding Loans or Other Extensions of Credit***. The Company does not have any outstanding extension of credit, in the form of a personal loan, to or for any director or executive officer (or equivalent thereof) of the Company except for such extensions of credit as are expressly permitted by Section 13(k) of the Exchange Act.

(oo) ***Emerging Growth Company Status***. From the time of initial confidential submission of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged in any Section 5(d) Written Communication or any Section 5(d) Oral Communication) through the date hereof, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the Securities Act (an "**Emerging Growth Company**").

(pp) ***Communications***. The Company (i) has not alone engaged in communications with potential investors in reliance on Section 5(d) of the Securities Act other than Permitted Section 5(d) Communications with the consent of the Representatives with entities that are QIBs or IAIs and (ii) has not authorized anyone other than the Representatives to engage in such communications; the Company reconfirms that the Representatives have been authorized to act on its behalf in undertaking Section 5(d) Oral Communications and Section 5(d) Written Communications; as of the Applicable Time, each Permitted Section 5(d) Communication, when considered together with the Time of Sale Prospectus, did not, as of the Applicable Time, include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they

were made, not misleading; and each Permitted Section 5(d) Communication, if any, does not, as of the date hereof, conflict with the information contained in the Registration Statement, the Preliminary Prospectus and the Prospectus; and the Company has filed publicly on EDGAR at least 21 calendar days prior to any "road show" (as defined in Rule 433 under the Act), any confidentially submitted registration statement and registration statement amendments relating to the offer and sale of the Offered Shares.

(qq) ***Clinical Data and Regulatory Compliance.*** The preclinical tests and clinical trials, and other studies (collectively, "**studies**") that are described in the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus were and, if still pending, are, to the Company's knowledge, being conducted in all material respects in accordance with the protocols, procedures and controls designed and approved for such studies; each description of the results of such studies is to the Company's knowledge accurate and complete in all material respects and fairly presents the data derived from such studies, and the Company has no knowledge of any other studies the results of which are inconsistent with, or otherwise call into question, the results described or referred to in the Registration Statement, the Time of Sale Prospectuses, the Prospectus or the Canadian Prospectus; the Company has made all such filings and obtained all such approvals as may be required by the Food and Drug Administration of the U.S. Department of Health and Human Services or any committee thereof or from any other U.S. or foreign government or drug or medical device regulatory agency, or health care facility Institutional Review Board (collectively, the "**Regulatory Agencies**"), except as could not be reasonably expected, individually or in the aggregate, to have a Material Adverse Effect; the Company has not received any notice of, or correspondence from, any Regulatory Agency requiring the termination, suspension or material modification of any clinical trials that are described or referred to in the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus; and the Company has operated and currently is in compliance in all material respects with all applicable rules and regulations of the Regulatory Agencies.

(rr) ***Compliance with Health Care Laws.*** The Company is, and at all times has been, in compliance in all material respects with all Health Care Laws. For purposes of this Agreement, "**Health Care Laws**" means: (i) the Federal Food, Drug, and Cosmetic Act and the regulations promulgated thereunder; (ii) all applicable federal, state, local and all applicable foreign health care related fraud and abuse laws, including, without limitation, the U.S. Anti-Kickback Statute (42 U.S.C. Section 1320a-7b(b)), the Anti-Inducement Law (42 U.S.C. § 1320a-7a(a)(5)), the U.S. Civil False Claims Act (31 U.S.C. Section 3729 et seq.), all applicable federal, state, local and all applicable foreign criminal laws relating to health care fraud and abuse, including but not limited to 18 U.S.C. Sections 286 and 287, and the health care fraud criminal provisions under the U.S. Health Insurance Portability and Accountability Act of 1996 ("**HIPAA**") (42 U.S.C. Section 1320d et seq.), the exclusion laws, the statutes, regulations and directives of applicable government funded or sponsored healthcare programs, and the regulations promulgated pursuant to such statutes; (iii) the Standards for Privacy of Individually Identifiable Health Information (the "**Privacy Rule**"), the Security Standards, and the Standards for Electronic Transactions and Code Sets promulgated under HIPAA, the Health Information Technology for Economic and Clinical Health Act (42 U.S.C. Section 17921 et seq.), and the regulations promulgated thereunder and any applicable state or foreign counterpart thereof or other applicable law or regulation the purpose of which is to protect the privacy of individuals or prescribers; (iv) the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Affordability Reconciliation Act of 2010, the regulations promulgated thereunder; (v) the U.S. Controlled Substances Act (21 U.S.C. Section 801 et seq.); (vi) quality, safety and accreditation requirements under applicable federal, state, local or foreign laws or regulatory bodies; and (vii) all other local, state, federal, national, supranational and foreign laws, applicable to the regulation of the Company. The Company has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any court or arbitrator or governmental or regulatory authority or third party alleging that any

product operation or activity is in violation of any Health Care Laws nor, to the Company's knowledge, is any such claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action threatened. The Company has filed, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws, and, to the Company's knowledge, all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and accurate on the date filed in all material respects (or were corrected or supplemented by a subsequent submission). The Company is not a party to any corporate integrity agreements, monitoring agreements, consent decrees, settlement orders, or similar agreements related to enforcement actions with or imposed by any governmental or regulatory authority. Additionally, neither the Company nor any of its respective employees, officers or directors has been excluded, suspended or debarred from participation in any U.S. federal health care program or human clinical research or, to the knowledge of the Company, is subject to a governmental inquiry, investigation, proceeding, or other similar action that could reasonably be expected to result in debarment, suspension, or exclusion.

(ss) ***No Contract Terminations.*** Except as otherwise disclosed in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus, the Company has not sent or received any communication regarding termination of, or intent not to renew, any of the contracts or agreements referred to or described in any preliminary prospectus, the Prospectus, the Canadian Prospectus or any free writing prospectus, or referred to or described in, or filed as an exhibit to, the Registration Statement, and no such termination or non-renewal has been threatened by the Company or, to the Company's knowledge, any other party to any such contract or agreement, which threat of termination or non-renewal has not been rescinded as of the date hereof.

(tt) ***Submission to Jurisdiction***. The Company has the power to submit, and pursuant to Section 18 of this Agreement, has legally, validly, effectively and irrevocably submitted, to the personal jurisdiction of each United States federal court and New York state court located in the Borough of Manhattan, in the City of New York, New York, U.S.A. (each, a "**New York Court**"), and the Company has the power to designate, appoint and authorize, and pursuant to Section 18 of this Agreement, has legally, validly, effectively and irrevocably designated, appointed and authorized an agent for service of process in any action arising out of or relating to this Agreement or the Offered Shares in any New York Court, and service of process effected on such authorized agent will be effective to confer valid personal jurisdiction over the Company as provided in Section 18 hereof.

Any certificate signed by any officer of the Company and delivered to any Underwriter or to counsel for the Underwriters in connection with the offering, or the purchase and sale, of the Offered Shares shall be deemed a representation and warranty by the Company to each Underwriter as to the matters covered thereby.

The Company has a reasonable basis for making each of the representations set forth in this Section 1. The Company acknowledges that the Underwriters and, for purposes of the opinions to be delivered pursuant to Section 6 hereof, counsel to the Company and counsel to the Underwriters, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

Section 2. Purchase, Sale and Delivery of the Offered Shares.

(a) ***The Firm Shares.*** Upon the terms herein set forth, the Company agrees to issue and sell to the several Underwriters an aggregate of [—] Firm Shares. On the basis of the representations, warranties and agreements herein contained, and upon the terms but subject to the conditions herein set forth, the Underwriters agree, severally and not jointly, to purchase from the Company the respective number of Firm Shares set forth opposite their names on Schedule A. The purchase price per Firm Share to be paid by the several Underwriters to the Company shall be $[—] per share.

(b) ***The First Closing Date*****.** Delivery of certificates for the Firm Shares to be purchased by the Underwriters and payment therefor shall be made at the offices of Cooley LLP, 4401 Eastgate Mall, San Diego, California 92121 (or such other place as may be agreed to by the Company and the Representatives) at 9:00 a.m. New York City time, on [—], 2014, or such other time and date not later than 1:30 p.m. New York City time, on [—], 2014 as the Representatives shall designate by notice to the Company (the time and date of such closing are called the "**First Closing Date**"). The Company hereby acknowledges that circumstances under which the Representatives may provide notice to postpone the First Closing Date as originally scheduled include, but are not limited to, any determination by the Company or the Representatives to recirculate to the public copies of an amended or supplemented Prospectus or a delay as contemplated by the provisions of Section 11.

(c) ***The Optional Shares; Option Closing Date*****.** In addition, on the basis of the representations, warranties and agreements herein contained, and upon the terms but subject to the conditions herein set forth, the Company hereby grants an option to the several Underwriters to purchase, severally and not jointly, up to an aggregate of [—] Optional Shares from the Company at the purchase price per share to be paid by the Underwriters for the Firm Shares. The option granted hereunder may be exercised at any time and from time to time in whole or in part upon notice by the Representatives to the Company, which notice may be given at any time within 30 days from the date of this Agreement. Such notice shall set forth (i) the aggregate number of Optional Shares as to which the Underwriters are exercising the option and (ii) the time, date and place at which certificates for the Optional Shares will be delivered (which time and date may be simultaneous with, but not earlier than, the First Closing Date; and in the event that such time and date are simultaneous with the First Closing Date, the term "**First Closing Date**" shall refer to the time and date of delivery of certificates for the Firm Shares and such Optional Shares). Any such time and date of delivery, if subsequent to the First Closing Date, is called an "**Option Closing Date**," shall be determined by the Representatives and shall not be earlier than three or later than five full business days after delivery of such notice of exercise. If any Optional Shares are to be purchased, (a) each Underwriter agrees, severally and not jointly, to purchase the number of Optional Shares (subject to such adjustments to eliminate fractional shares as the Representatives may determine) that bears the same proportion to the total number of Optional Shares to be purchased as the number of Firm Shares set forth on Schedule A opposite the name of such Underwriter bears to the total number of Firm Shares and (b) the Company agrees to sell the number of Optional Shares set forth in the paragraph "Introductory" of this Agreement (subject to such adjustments to eliminate fractional shares as the Representatives may determine). The Representatives may cancel the option at any time prior to its expiration by giving written notice of such cancellation to the Company.

(d) ***Public Offering of the Offered Shares*****.** The Representatives hereby advise the Company that the Underwriters intend to offer for sale to the public, initially on the terms set forth in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus, their respective portions of the Offered Shares as soon after this Agreement has been executed, the Registration Statement has been declared effective and a receipt for the Canadian Prospectus has been obtained, as the Representatives, in their sole judgment, have determined is advisable and practicable. Each Underwriter shall be permitted to appoint additional investment dealers or brokers (each, a "***Selling Firm***") as its agents in the offering of the Offered Shares and each such Underwriter may determine the remuneration payable to such Selling Firm. The Underwriters may offer the Offered Shares, directly and through Selling Firms or any affiliate of an Underwriter, in the Qualifying Jurisdictions and the United States for sale to the public or to purchasers otherwise permitted to purchase the Offered Shares in accordance with the Securities Act and the Canadian Securities Laws and upon the terms and conditions

set forth in the Registration Statement, the Prospectus, the Time of Sale Prospectus, the Canadian Prospectus and this Agreement. Each Underwriter shall require any Selling Firm appointed by such Underwriter to agree to the foregoing and such Underwriter shall be severally responsible for the compliance by such Selling Firm with the provisions of this Agreement. For greater certainty, no Underwriter will be liable to the Company under this Section 2(d) with respect to a default by another Underwriter, another Underwriter's affiliate or another Underwriter's appointed Selling Firm, as the case may be.

(e) ***Payment for the Offered Shares*****.**

(i) Payment for the Offered Shares to be sold by the Company shall be made at the First Closing Date (and, if applicable, at each Option Closing Date) by wire transfer of immediately available funds to the order of the Company.

(ii) It is understood that Jefferies has been authorized, for its own account and the accounts of the several Underwriters, to accept delivery of and receipt for, and make payment of the purchase price for, the Firm Shares and any Optional Shares the Underwriters have agreed to purchase. Jefferies, individually and not as a Representative of the Underwriters, may (but shall not be obligated to) make payment for any Offered Shares to be purchased by any Underwriter whose funds shall not have been received by Jefferies by the First Closing Date or the applicable Option Closing Date, as the case may be, for the account of such Underwriter, but any such payment shall not relieve such Underwriter from any of its obligations under this Agreement.

(f) ***Delivery of the Offered Shares*****.** The Company shall deliver, or cause to be delivered to Jefferies for the accounts of the several Underwriters, certificates for the Firm Shares to be sold by them at the First Closing Date, against release of a wire transfer of immediately available funds for the amount of the purchase price therefor. The Company shall also deliver, or cause to be delivered to Jefferies for the accounts of the several Underwriters, certificates for the Optional Shares the Underwriters elect to purchase from the Company at the First Closing Date or the applicable Option Closing Date, as the case may be, against the release of a wire transfer of immediately available funds for the amount of the purchase price therefor. If Jefferies so elects, delivery of the Offered Shares may be made by credit to the accounts designated by Jefferies through The Depository Trust Company's full fast transfer or DWAC programs. If Jefferies so elects, the certificates for the Offered Shares shall be in definitive form and registered in such names and denominations as Jefferies shall have requested at least two full business days prior to the First Closing Date (or the applicable Option Closing Date, as the case may be) and shall be made available for inspection on the business day preceding the First Closing Date (or the applicable Option Closing Date, as the case may be) at a location in New York City as Jefferies may designate. Time shall be of the essence, and delivery at the time and place specified in this Agreement is a further condition to the obligations of the Underwriters.

Section 3. Additional Covenants of the Company. The Company further covenants and agrees with each Underwriter as follows:

(a) ***Delivery of Registration Statement, Time of Sale Prospectus and Prospectus.*** The Company shall furnish to you in New York City, without charge, prior to 10:00 a.m. New York City time on the business day next succeeding the date of this Agreement and during the period when a prospectus relating to the Offered Shares is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with sales of the Offered Shares, as many copies of the Time of Sale Prospectus, the Prospectus and any supplements and amendments thereto or to the Registration Statement as you may reasonably request.

(b) ***Representatives' Review of Proposed Amendments and Supplements.*** During the period when a prospectus relating to the Offered Shares is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), the Company (i) will furnish to the Representatives for review, a reasonable period of time prior to the proposed time of filing of any proposed amendment or supplement to the Registration Statement, a copy of each such amendment or supplement and (ii) will not amend or supplement the Registration Statement without the Representatives' prior written consent (which shall not be unreasonably withheld or delayed). Prior to amending or supplementing any preliminary prospectus, the Time of Sale Prospectus or the Prospectus, the Company shall furnish to the Representatives for review, a reasonable amount of time prior to the time of filing or use of the proposed amendment or supplement, a copy of each such proposed amendment or supplement. The Company shall not file or use any such proposed amendment or supplement without the Representatives' prior written consent (which shall not be unreasonably withheld or delayed). The Company shall file with the Commission within the applicable period specified in Rule 424(b) under the Securities Act any prospectus required to be filed pursuant to such Rule.

(c) ***Free Writing Prospectuses.*** The Company shall furnish to the Representatives for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each proposed free writing prospectus or any amendment or supplement thereto prepared by or on behalf of, used by, or referred to by the Company, and the Company shall not file, use or refer to any proposed free writing prospectus or any amendment or supplement thereto without the Representatives' prior written consent (which shall not be unreasonably withheld or delayed). The Company shall furnish to each Underwriter, without charge, as many copies of any free writing prospectus prepared by or on behalf of, used by or referred to by the Company as such Underwriter may reasonably request. If at any time when a prospectus is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) in connection with sales of the Offered Shares (but in any event if at any time through and including the First Closing Date) there occurred or occurs an event or development as a result of which any free writing prospectus prepared by or on behalf of, used by, or referred to by the Company conflicted or would conflict with the information contained in the Registration Statement or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at such time, not misleading, the Company shall promptly amend or supplement such free writing prospectus to eliminate or correct such conflict or so that the statements in such free writing prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at such time, not misleading, as the case may be; *provided, however*, that prior to amending or supplementing any such free writing prospectus, the Company shall furnish to the Representatives for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of such proposed amended or supplemented free writing prospectus, and the Company shall not file, use or refer to any such amended or supplemented free writing prospectus without the Representatives' prior written consent (which shall not be unreasonably withheld or delayed).

(d) ***Filing of Underwriter Free Writing Prospectuses.*** The Company shall not take any action that would result in an Underwriter or the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of such Underwriter that such Underwriter otherwise would not have been required to file thereunder.

(e) ***Amendments and Supplements to Time of Sale Prospectus.*** If the Time of Sale Prospectus is being used to solicit offers to buy the Offered Shares at a time when the Prospectus is not yet available to prospective purchasers, and any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Time of Sale Prospectus so that the Time of Sale Prospectus

does not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when delivered to a prospective purchaser, not misleading, or if any event shall occur or condition exist as a result of which the Time of Sale Prospectus conflicts with the information contained in the Registration Statement, or if, in the opinion of counsel for the Underwriters, it is necessary to amend or supplement the Time of Sale Prospectus to comply with applicable law, the Company shall (subject to Section 3(b) and Section 3(c) hereof) promptly prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer upon request, either amendments or supplements to the Time of Sale Prospectus so that the statements in the Time of Sale Prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when delivered to a prospective purchaser, not misleading or so that the Time of Sale Prospectus, as amended or supplemented, will no longer conflict with the information contained in the Registration Statement, or so that the Time of Sale Prospectus, as amended or supplemented, will comply with applicable law.

(f) ***Certain Notifications and Required Actions.*** After the date of this Agreement, the Company shall promptly advise the Representatives in writing (which may be by email) of: (i) the receipt of any comments of, or requests for additional or supplemental information from, the Commission or the BCSC relating to the Registration Statement, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus received by the Company before the later of one year from the date of this Agreement or the expiration of the Prospectus delivery period pursuant to Rule 174 of the Securities Act; (ii) the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus or the Prospectus; (iii) the time and date that any post-effective amendment to the Registration Statement becomes effective; (iv) the issuance by the Commission or the BCSC of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or any amendment or supplement to any preliminary prospectus, the Time of Sale Prospectus, the Prospectus or the Canadian Prospectus or of any order preventing or suspending the use of any preliminary prospectus, the Time of Sale Prospectus, any free writing prospectus, the Prospectus or the Canadian Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Shares from any securities exchange upon which they are listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes; and (v) any order suspending the distribution of the Offered Shares or any other securities of the Company has been issued by any Canadian regulatory authority. If the Commission shall enter any such stop order at any time, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment. Additionally, the Company agrees that it shall comply with all applicable provisions of Rule 424(b), Rule 433 and Rule 430A under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under Rule 424(b) or Rule 433 were received in a timely manner by the Commission.

(g) ***Amendments and Supplements to the Prospectus and Other Securities Act Matters.*** If any event shall occur or condition exist as a result of which it is necessary to amend or supplement the Prospectus so that the Prospectus does not include an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) to a purchaser, not misleading, or if in the opinion of the Representatives or counsel for the Underwriters it is otherwise necessary to amend or supplement the Prospectus to comply with applicable law, the Company agrees (subject to Section 3(b) and Section 3(c)) to promptly prepare, file with the Commission and furnish, at its own expense, to the Underwriters and to any dealer upon request, amendments or supplements to the Prospectus so that the statements in the Prospectus as so amended or supplemented will not include an untrue statement of a material fact or omit

to state a material fact necessary in order to make the statements therein, in the light of the circumstances when the Prospectus is delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) to a purchaser, not misleading or so that the Prospectus, as amended or supplemented, will comply with applicable law. Neither the Representatives' consent to, nor delivery of, any such amendment or supplement shall constitute a waiver of any of the Company's obligations under Section 3(b) or Section 3(c).

(h) ***Canadian Prospectus.*** The Company shall furnish to the Representatives for review, a reasonable amount of time prior to the proposed time of filing or use thereof, a copy of each proposed Canadian Prospectus or any amendment or supplement thereto prepared by or on behalf of, used by, or referred to by the Company, and the Company shall not file, use or refer to any Canadian Prospectus or any amendment or supplement thereto without the Representatives' prior written consent. The Company shall furnish to each Underwriter, without charge, as many copies of the Canadian Prospectus prepared by or on behalf of, used by or referred to by the Company as such Underwriter may reasonably request.

(i) ***Blue Sky Compliance*****.** The Company shall cooperate with the Representatives and counsel for the Underwriters to qualify or register the Offered Shares for sale under (or obtain exemptions from the application of) the state securities or blue sky laws (or other foreign laws) of those jurisdictions designated by the Representatives, shall comply with such laws and shall continue such qualifications, registrations and exemptions in effect so long as required for the distribution of the Offered Shares. The Company shall not be required to qualify as a foreign corporation or to take any action that would subject it to general service of process in any such jurisdiction where it is not presently qualified or where it would be subject to taxation as a foreign corporation. The Company will advise the Representatives promptly of the suspension of the qualification or registration of (or any such exemption relating to) the Offered Shares for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company shall use its best efforts to obtain the withdrawal thereof at the earliest possible moment.

(j) ***Use of Proceeds*****.** The Company shall apply the net proceeds from the sale of the Offered Shares sold by it in the manner described under the caption "Use of Proceeds" in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus.

(k) ***Transfer Agent.*** The Company shall engage and maintain, at its expense, a registrar and transfer agent for the Shares.

(l) ***Earnings Statement.*** The Company will make generally available to its security holders and to the Representatives as soon as practicable an earnings statement (which need not be audited) covering a period of at least twelve months beginning with the first fiscal quarter of the Company commencing after the date of this Agreement that will satisfy the provisions of Section 11(a) of the Securities Act and the rules and regulations of the Commission thereunder.

(m) ***Continued Compliance with Securities Laws.*** The Company will comply with the Securities Act, the Exchange Act and Canadian Securities Laws so as to permit the completion of the distribution of the Offered Shares as contemplated by this Agreement, the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus. Without limiting the generality of the foregoing, the Company will, during the period when a prospectus relating to the Offered Shares is required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule), file on a timely basis with the Commission and the NASDAQ all reports and documents required to be filed under the Exchange Act. Additionally, the Company shall report the use of proceeds from the issuance of the Offered Shares as may be required under Rule 463 under the Securities Act.

(n) ***Listing.*** The Company will use its best efforts to list, subject to notice of issuance, the Offered Shares on the NASDAQ.

(o) ***Company to Provide Copy of the Prospectus in Form That May be Downloaded from the Internet.*** The Company shall cause to be prepared and delivered, at its expense, within one business day from the effective date of this Agreement, to the Representatives an "**electronic Prospectus**" to be used by the Underwriters in connection with the offering and sale of the Offered Shares. As used herein, the term "**electronic Prospectus**" means a form of the Prospectus (and Time of Sale Prospectus if the Prospectus is not yet available), and any amendment or supplement thereto, that meets each of the following conditions: (i) it shall be encoded in an electronic format, satisfactory to the Representatives, that may be transmitted electronically by the Representatives and the other Underwriters to offerees and purchasers of the Offered Shares; (ii) it shall disclose the same information as the paper Prospectus or Time of Sale Prospectus, as the case may be, except to the extent that graphic and image material cannot be disseminated electronically, in which case such graphic and image material shall be replaced in the electronic Prospectus with a fair and accurate narrative description or tabular representation of such material, as appropriate; and (iii) it shall be in or convertible into a paper format or an electronic format, satisfactory to the Representatives, that will allow investors to store and have continuously ready access to the Prospectus or Time of Sale Prospectus, as the case may be, at any future time, without charge to investors (other than any fee charged for subscription to the Internet as a whole and for on-line time). The Company hereby confirms that it has included or will include in the Prospectus filed pursuant to EDGAR or otherwise with the Commission and in the Registration Statement at the time it was declared effective an undertaking that, upon receipt of a request by an investor or his or her representative, the Company shall transmit or cause to be transmitted promptly, without charge, a paper copy of the Prospectus.

(p) ***Agreement Not to Offer or Sell Additional Shares.*** During the period commencing on and including the date hereof and continuing through and including the 180th day following the date of the Prospectus (such period being referred to herein as the "**Lock-up Period**"), the Company will not, without the prior written consent of the Representatives (which consent may be withheld in their sole discretion), directly or indirectly: (i) sell, offer to sell, contract to sell or lend any Shares or Related Securities (as defined below); (ii) effect any short sale, or establish or increase any "put equivalent position" (as defined in Rule 16a-1(h) under the Exchange Act) or liquidate or decrease any "call equivalent position" (as defined in Rule 16a-1(b) under the Exchange Act) of any Shares or Related Securities; (iii) pledge, hypothecate or grant any security interest in any Shares or Related Securities; (iv) in any other way transfer or dispose of any Shares or Related Securities; (v) enter into any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of any Shares or Related Securities, regardless of whether any such transaction is to be settled in securities, in cash or otherwise; (vi) announce the offering of any Shares or Related Securities; (vii) file any registration statement under the Securities Act in respect of any Shares or Related Securities (other than as contemplated by this Agreement with respect to the Offered Shares and other than the filing of one or more registration statements on Form S-8 in respect of any shares issued under or the grant of any award pursuant to an employee benefit plan in effect on the date hereof and that are described in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus); or (viii) publicly announce the intention to do any of the foregoing; *provided, however*, that the Company may (A) effect the transactions contemplated hereby, (B) issue Shares or options to purchase Shares, or issue Shares upon exercise of Related Securities, pursuant to any stock option, stock bonus or other stock plan or arrangement described in the Registration Statement, the Time of Sale Prospectus, the Prospectus and the Canadian Prospectus, but only if the recipients of options to purchase Shares granted during the

Lock-up Period that may become exercisable during the Lock-up Period agree in writing with the Underwriters not to sell, offer, dispose of or otherwise transfer any such options (or Shares issued upon the exercise of such options) during such Lock-up Period without the prior written consent of the Representatives (which consent may be withheld in their sole discretion), and (C) issue Shares or Related Securities in an amount up to an aggregate of 5% of the sum of the Company's fully-diluted shares outstanding as of the date of the Prospectus (including the Firm Shares to be sold by the Company pursuant to this Agreement, the Optional Shares, only to the extent such Optional Shares are issued, and the common shares to be sold to Roche Finance Ltd in a concurrent private placement) in connection with mergers or acquisitions of securities, businesses, property or other assets (including pursuant to any employee benefit plans assumed in connection with such transactions), joint ventures, strategic alliances, partnering arrangements or equipment leasing arrangements); *provided that*, in the case of clause (C) and for the avoidance of doubt, that the Company shall not file any registration statement under the Securities Act in respect of such Shares or Related Securities issued during the Lock-up Period. For purposes of the foregoing, "**Related Securities**" shall mean any options or warrants or other rights to acquire Shares or any securities exchangeable or exercisable for or convertible into Shares, or to acquire other securities or rights ultimately exchangeable or exercisable for, or convertible into, Shares.

(q) ***Future Reports to the Representatives.*** During the period of three years hereafter, the Company will furnish to the Representatives, c/o Jefferies, at 520 Madison Avenue, New York, New York 10022, Attention: Global Head of Syndicate, and Wells Fargo, at 375 Park Avenue, New York, New York 10152, Attention: Equity Syndicate Department (fax: (212) 214-5918): (i) as soon as practicable after the filing thereof, copies of each proxy statement, Annual Report on Form 10-K, Quarterly Report on Form 10-Q, Current Report on Form 8-K or other non-confidential report filed by the Company with the Commission; and (ii) as soon as available, copies of any report or communication of the Company furnished or made available generally to holders of its share capital; *provided*, *however,* that the requirements of this Section 3(q) shall be satisfied to the extent that such reports, statement, communications, financial statements or other documents are available on EDGAR.

(r) ***Investment Limitation*****.** The Company shall not invest or otherwise use the proceeds received by the Company from its sale of the Offered Shares in such a manner as would require the Company to register as an investment company under the Investment Company Act.

(s) ***No Stabilization or Manipulation; Compliance with Regulation M*****.** During the "restricted period" (as such term is defined in Regulation M) applicable to the offering of the Offered Shares contemplated by this Agreement and for 30 days from the date of this Agreement, the Company will not take, and will ensure that no controlled affiliate of the Company will take, directly or indirectly, any action designed to or that might reasonably be expected to cause or result in stabilization or manipulation of the price of the Shares or any reference security with respect to the Shares to facilitate the sale or resale of the Offered Shares, and the Company will, and shall cause each of its controlled affiliates to, comply with all applicable provisions of Regulation M.

(t) ***Enforce Lock-Up Agreements*****.** During the Lock-up Period, the Company will enforce all agreements between the Company and any of its security holders that restrict or prohibit, expressly or in operation, the offer, sale or transfer of Shares or Related Securities or any of the other actions restricted or prohibited under the terms of the form of Lock-up Agreement. In addition, the Company will direct the transfer agent to place stop transfer restrictions upon any such securities of the Company that are bound by such "lock-up" agreements for the duration of the periods contemplated in such agreements, including, without limitation, "lock-up" agreements entered into by the Company's officers, directors and shareholders pursuant to Section 6(i) hereof. If any persons shall become directors or officers of the Company prior to the end of the Company Lock-up Period, the Company shall cause each such person, prior to or contemporaneously with their appointment or election as a director or officer of the Company, to execute and deliver to the Representatives a Lock-up Agreement.

(u) ***Company to Provide Interim Financial Statements.*** Prior to the First Closing Date and each applicable Option Closing Date, the Company will furnish the Underwriters, as soon as they have been prepared by or are available to the Company, a copy of any unaudited interim financial statements of the Company for any period subsequent to the period covered by the most recent financial statements appearing in the Registration Statement and the Prospectus.

(v) ***Amendments and Supplements to Permitted Section 5(d) Communications***. If at any time following the distribution of any Permitted Section 5(d) Communication and prior to the completion of the distribution of the Offered Shares, there occurred or occurs an event or development as a result of which such Permitted Section 5(d) Communication included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representatives and, upon the request of the Representatives, will promptly amend or supplement, at its own expense, such Permitted Section 5(d) Communication to eliminate or correct such untrue statement or omission.

(w) ***Emerging Growth Company Status***. The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) the time when a prospectus relating to the Offered Shares is not required by the Securities Act to be delivered (whether physically or through compliance with Rule 172 under the Securities Act or any similar rule) and (ii) the expiration of the Lock-Up Period (as defined herein).

(x) ***Announcement Regarding Lock-ups***. The Company agrees to announce the Underwriters' intention to release any director or "officer" (within the meaning of Rule 16a-1(f) under the Exchange Act) of the Company from any of the restrictions imposed by any Lock-Up Agreement, by issuing, through a major news service, a press release in form and substance reasonably satisfactory to the Representatives promptly following the Company's receipt of any notification from the Representatives in which such intention is indicated, but in any case not later than the close of the third business day prior to the date on which such release or waiver is to become effective; provided, however, that nothing shall prevent the Representatives, on behalf of the Underwriters, from announcing the same through a major news service, irrespective of whether the Company has made the required announcement; and provided, further, that no such announcement shall be made of any release or waiver granted solely to permit a transfer of securities that is not for consideration and where the transferee has agreed in writing to be bound by the terms of a Lock-Up Agreement in the form set forth as Exhibit B hereto.

Section 4. Payment of Expenses. The Company agrees to pay all costs, fees and expenses incurred in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including without limitation (i) all expenses incident to the issuance and delivery of the Offered Shares (including all printing and engraving costs), (ii) all fees and expenses of the registrar and transfer agent of the Shares, (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Offered Shares to the Underwriters, (iv) all fees and expenses of the Company's counsel, independent public or certified public accountants and other advisors, (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Time of Sale Prospectus, the Prospectus, the Canadian Prospectus, each free writing prospectus prepared by or on behalf of, used by, or referred to by the Company, and each preliminary prospectus, each Permitted Section 5(d) Communication, and all amendments and supplements thereto,

and this Agreement, (vi) all filing fees, attorneys' fees and expenses incurred by the Company or the Underwriters in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Offered Shares for offer and sale under the state securities or blue sky laws, and, if requested by the Representatives, preparing and printing a "Blue Sky Survey" or memorandum, and any supplements thereto, advising the Underwriters of such qualifications, registrations and exemptions, (vii) the costs, fees and expenses incurred by the Underwriters in connection with determining their compliance with the rules and regulations of FINRA related to the Underwriters' participation in the offering and distribution of the Offered Shares, including any related filing fees and the legal fees of, and disbursements by, counsel to the Underwriters up to an aggregate of $[30,000] with respect to such counsel fees, (viii) the costs and expenses of the Company relating to investor presentations on any "road show", any Permitted Section 5(d) Communication or any Section 5(d) Oral Communication undertaken in connection with the offering of the Offered Shares, including, without limitation, expenses associated with the preparation or dissemination of any electronic road show, expenses associated with the production of road show slides and graphics, fees and expenses of any consultants engaged in connection with the road show presentations with the prior approval of the Company, travel and lodging expenses of the employees and officers of the Company and any such consultants, and one-half of the cost of any aircraft chartered in connection with the road show, (ix) the fees and expenses associated with listing the Offered Shares on the NASDAQ and (x) the fees and expenses of Canadian counsel to the Underwriters up to an aggregate of $50,000, which aggregate maximum amount shall not apply to any fees and expenses of Canadian counsel for work and advice related to the Canadian Prospectus including the preparation thereof, and up to an aggregate of $27,500 for fees and expenses of Canadian counsel for work and advice related to the Canadian Prospectus including the preparation thereof. Except as provided in this Section 4 or in Section 7, Section 9 or Section 10 hereof, the Underwriters shall pay their own expenses, including the fees and disbursements of their counsel, their own travel and lodging expenses and one-half of the cost of any aircraft chartered in connection with the road show.

Section 5. Covenants of the Underwriters. Each Underwriter severally and not jointly covenants with the Company not to take any action that would result in the Company being required to file with the Commission pursuant to Rule 433(d) under the Securities Act a free writing prospectus prepared by or on behalf of such Underwriter that otherwise would not, but for such actions, be required to be filed by the Company under Rule 433(d).

Section 6. Conditions of the Obligations of the Underwriters. The respective obligations of the several Underwriters hereunder to purchase and pay for the Offered Shares as provided herein on the First Closing Date and, with respect to the Optional Shares, each Option Closing Date, shall be subject to the accuracy of the representations and warranties on the part of the Company set forth in Section 1 hereof as of the date hereof and as of the First Closing Date as though then made and, with respect to the Optional Shares, as of each Option Closing Date as though then made, to the timely performance by the Company of its covenants and other obligations hereunder, and to each of the following additional conditions:

(a) ***Comfort Letters*****.** On the date hereof, the Representatives shall have received from KPMG LLP, independent registered public accountants for the Company, a letter dated the date hereof addressed to the Underwriters, in form and substance satisfactory to the Representatives, containing statements and information of the type ordinarily included in accountant's "comfort letters" to underwriters, delivered according to Statement of Auditing Standards No. 72 (or any successor bulletin), with respect to the audited and unaudited financial statements of the Company and certain financial information contained in the Registration Statement, the Time of Sale Prospectus, and each free writing prospectus, if any.

(b) ***Compliance with Registration Requirements; No Stop Order; No Objection from FINRA.*** For the period from and after the date of this Agreement and through and including the First Closing Date and, with respect to any Optional Shares purchased after the First Closing Date, each Option Closing Date:

(i) The Company shall have filed the Prospectus with the Commission (including the information required by Rule 430A under the Securities Act) in the manner and within the time period required by Rule 424(b) under the Securities Act; or the Company shall have filed a post-effective amendment to the Registration Statement containing the information required by such Rule 430A, and such post-effective amendment shall have become effective.

(ii) No stop order suspending the effectiveness of the Registration Statement or any post-effective amendment to the Registration Statement shall be in effect, and no proceedings for such purpose shall have been instituted or threatened by the Commission.

(iii) FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

(c) ***No Material Adverse Change*****.** For the period from and after the date of this Agreement and through and including the First Closing Date and, with respect to any Optional Shares purchased after the First Closing Date, each Option Closing Date, in the judgment of the Representatives there shall not have occurred any Material Adverse Change.

(d) ***Opinion of Counsel for the Company*****.** On each of the First Closing Date and each Option Closing Date, the Representatives shall have received the opinion of each of (i) Wilson Sonsini Goodrich & Rosati, Professional Corporation, U.S. counsel for the Company, dated as of such date, in the form attached hereto as Exhibit A-1 and to such further effect as the Representatives shall reasonably request and (ii) McCarthy Tétrault LLP, Canadian counsel for the Company, dated as of such date, in the form attached hereto as Exhibit A-2 and to such further effect as the Representatives shall reasonably request.

(e) ***Opinions of Intellectual Property Counsel for the Company*****.** On each of the First Closing Date and each Option Closing Date, the Representatives shall have received the opinions of Gowling Lafleur & Henderson LLP, intellectual property counsel for the Company, and Seed Intellectual Property Law Group PLLC, intellectual property counsel for the Company, dated as of such date, in the forms satisfactory to the Representatives.

(f) ***Opinion of Counsel for the Underwriters*****.** On each of the First Closing Date and each Option Closing Date, the Representatives shall have received the opinion of Cooley LLP, U.S. counsel for the Underwriters, in connection with the offer and sale of the Offered Shares, in form and substance satisfactory to the Representatives, dated as of such date.

(g) ***Officers' Certificate*****.** On each of the First Closing Date and each Option Closing Date, the Representatives shall have received a certificate executed by the Chief Executive Officer or President of the Company and the Chief Financial Officer of the Company, dated as of such date, to the effect set forth in Section 6(b)(ii) and further to the effect that:

(i) for the period from and including the date of this Agreement through and including such date, there has not occurred any Material Adverse Change;

(ii) the representations, warranties and covenants of the Company set forth in Section 1 of this Agreement are true and correct with the same force and effect as though expressly made on and as of such date; and

(iii) the Company has complied with all the agreements hereunder and satisfied all the conditions on its part to be performed or satisfied hereunder at or prior to such date.

(h) ***Bring-down Comfort Letters*****.** On each of the First Closing Date and each Option Closing Date, the Representatives shall have received from KPMG LLP, independent registered public accountants for the Company, a letter dated such date, in form and substance satisfactory to the Representatives, which letter shall: (i) reaffirm the statements made in the letter furnished by them pursuant to Section 6(a), except that the specified date referred to therein for the carrying out of procedures shall be no more than three business days prior to the First Closing Date or the applicable Option Closing Date, as the case may be; and (ii) cover certain financial information contained in the Prospectus.

(i) ***Lock-Up Agreements.*** On or prior to the date hereof, the Company shall have furnished to the Representatives an agreement substantially in the form of Exhibit B hereto from each of the directors, officers and from the holders of [96]% of the outstanding equity securities of the Company and each such agreement shall be in full force and effect on each of the First Closing Date and each Option Closing Date.

(j) ***Rule 462(b) Registration Statement.*** In the event that a Rule 462(b) Registration Statement is filed in connection with the offering contemplated by this Agreement, such Rule 462(b) Registration Statement shall have been filed with the Commission on the date of this Agreement and shall have become effective automatically upon such filing.

(k) ***Approval of Listing***. At the First Closing Date, the Offered Shares shall have been approved for listing on the NASDAQ, subject only to official notice of issuance.

(l) ***Additional Documents***. On or before each of the First Closing Date and each Option Closing Date, the Representatives and counsel for the Underwriters shall have received such information, documents and opinions as they may reasonably request for the purposes of enabling them to pass upon the issuance and sale of the Offered Shares as contemplated herein, or in order to evidence the accuracy of any of the representations and warranties, or the satisfaction of any of the conditions or agreements, herein contained; and all proceedings taken by the Company in connection with the issuance and sale of the Offered Shares as contemplated herein and in connection with the other transactions contemplated by this Agreement shall be reasonably satisfactory in form and substance to the Representatives and counsel for the Underwriters.

If any condition specified in this Section 6 is not satisfied when and as required to be satisfied, this Agreement may be terminated by the Representatives by notice from the Representatives to the Company at any time on or prior to the First Closing Date and, with respect to the Optional Shares, at any time on or prior to the applicable Option Closing Date, which termination shall be without liability on the part of any party to any other party, except that Section 4, Section 7, Section 9 and Section 10 shall at all times be effective and shall survive such termination.

Section 7. Reimbursement of Underwriters' Expenses. If this Agreement is terminated by the Representatives pursuant to Section 6, Section 12(i), Section 12(v) or Section 12(vi), or if the sale to the Underwriters of the Offered Shares on the First Closing Date is not consummated because of any refusal, inability or failure on the part of the Company to perform any agreement herein or to

comply with any provision hereof, the Company agrees to reimburse the Representatives and the other Underwriters (or such Underwriters as have terminated this Agreement with respect to themselves), severally, upon demand for all out-of-pocket expenses that shall have been reasonably incurred by the Representatives and the Underwriters in connection with the proposed purchase and the offering and sale of the Offered Shares, including, but not limited to, reasonable fees and expenses of counsel, printing expenses, travel expenses, postage, facsimile and telephone charges.

Section 8. Effectiveness of this Agreement. This Agreement shall become effective upon the execution and delivery hereof by the parties hereto.

Section 9. Indemnification.

(a) ***Indemnification of the Underwriters*****.** The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, directors, officers, employees and agents, and each person, if any, who controls any Underwriter within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage, liability or expense, as incurred, to which such Underwriter or such affiliate, director, officer, employee, agent or controlling person may become subject, under the Securities Act, the Exchange Act, other federal or state or provincial statutory law or regulation (including Canadian Securities Laws), or the laws or regulations of foreign jurisdictions where Offered Shares have been offered or sold or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of the Company), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (A) (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, or the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) any untrue statement or alleged untrue statement of a material fact included in any preliminary prospectus, the Time of Sale Prospectus, the Canadian Prospectus, any free writing prospectus that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433(d) of the Securities Act, any Section 5(d) Written Communication or the Prospectus (or any amendment or supplement to the foregoing), or the omission or alleged omission to state therein a material fact necessary in order to make the statements, in the light of the circumstances under which they were made, not misleading; or (B) the violation by the Company of any laws or regulations of foreign jurisdictions where Offered Shares have been offered or sold; and to reimburse each Underwriter and each such affiliate, director, officer, employee, agent and controlling person for any and all expenses (including the reasonable fees and disbursements of counsel) as such expenses are incurred by such Underwriter or such affiliate, director, officer, employee, agent or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; *provided, however*, that the foregoing indemnity agreement shall not apply to any loss, claim, damage, liability or expense to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company by the Representatives in writing expressly for use in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, the Canadian Prospectus, any such free writing prospectus, any Section 5(d) Written Communication or the Prospectus (or any amendment or supplement thereto), it being understood and agreed that the only such information consists of the information described in Section 9(b) below. The indemnity agreement set forth in this Section 9(a) shall be in addition to any liabilities that the Company may otherwise have.

(b) ***Indemnification of the Company, its Directors and Officers.*** Each Underwriter agrees, severally and not jointly, to indemnify and hold harmless the Company, each of its directors, each of its officers who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of the Securities Act or the Exchange Act, against any loss, claim, damage, liability

or expense, as incurred, to which the Company, or any such director, officer, or controlling person may become subject, under the Securities Act, the Exchange Act, or other federal or state or provincial statutory law or regulation (including Canadian Securities Laws), or the laws or regulations of foreign jurisdictions where Offered Shares have been offered or sold, or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Underwriter), insofar as such loss, claim, damage, liability or expense (or actions in respect thereof as contemplated below) arises out of or is based upon (i) any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, or any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading or (ii) any untrue statement or alleged untrue statement of a material fact included in any preliminary prospectus, the Time of Sale Prospectus, the Canadian Prospectus, any free writing prospectus, that the Company has used, referred to or filed, or is required to file, pursuant to Rule 433 of the Securities Act, any Section 5(d) Written Communication or the Prospectus (or any such amendment or supplement) or the omission or alleged omission to state therein a material fact necessary in order to make the statements, in the light of the circumstances under which they were made, not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, such preliminary prospectus, the Time of Sale Prospectus, the Canadian Prospectus, such free writing prospectus, such Section 5(d) Written Communication or the Prospectus (or any such amendment or supplement), in reliance upon and in conformity with information relating to such Underwriter furnished to the Company by the Representatives in writing expressly for use therein; and to reimburse the Company, or any such director, officer, or controlling person for any and all expenses (including the reasonable fees and disbursements of counsel) as such expenses are incurred by the Company, or any such director, officer, or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. The Company hereby acknowledges that the only information that the Representatives have furnished to the Company expressly for use in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, the Canadian Prospectus, any free writing prospectus that the Company has filed, or is required to file, pursuant to Rule 433(d) of the Securities Act, any Section 5(d) Written Communication or the Prospectus (or any amendment or supplement to the foregoing) are the statements set forth in [the first sentence of the third paragraph, the third sentence of the fourth paragraph, the first three sentences of the first paragraph under the section entitled “Commission and Expenses,” and the first sentence of the first paragraph under the section entitled “Stabilization,”] each under the caption “Underwriting” in the Preliminary Prospectus, the Prospectus and the Canadian Prospectus. The indemnity agreement set forth in this Section 9(b) shall be in addition to any liabilities that each Underwriter may otherwise have.

(c) ***Notifications and Other Indemnification Procedures*****.** Promptly after receipt by an indemnified party under this Section 9 of notice of the commencement of any action, such indemnified party will, if a claim in respect thereof is to be made against an indemnifying party under this Section 9, notify the indemnifying party in writing of the commencement thereof, but the omission so to notify the indemnifying party will not relieve the indemnifying party from any liability which it may have to any indemnified party to the extent the indemnifying party is not materially prejudiced as a proximate result of such failure and shall not in any event relieve the indemnifying party from any liability that it may have otherwise than on account of this indemnity agreement. In case any such action is brought against any indemnified party and such indemnified party seeks or intends to seek indemnity from an indemnifying party, the indemnifying party will be entitled to participate in, and, to the extent that it shall elect, jointly with all other indemnifying parties similarly notified, by written notice delivered to the indemnified party promptly after receiving the aforesaid notice from such indemnified party, to assume the defense thereof with counsel reasonably satisfactory to such indemnified party; *provided, however*, that if the defendants in any such action include both the indemnified party and the indemnifying party and the indemnified party shall have reasonably concluded that a conflict may arise

between the positions of the indemnifying party and the indemnified party in conducting the defense of any such action or that there may be legal defenses available to it and/or other indemnified parties which are different from or additional to those available to the indemnifying party, the indemnified party or parties shall have the right to select separate counsel to assume such legal defenses and to otherwise participate in the defense of such action on behalf of such indemnified party or parties. Upon receipt of notice from the indemnifying party to such indemnified party of such indemnifying party's election so to assume the defense of such action and approval by the indemnified party of counsel, the indemnifying party will not be liable to such indemnified party under this Section 9 for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof unless (i) the indemnified party shall have employed separate counsel in accordance with the proviso to the preceding sentence (it being understood, however, that the indemnifying party shall not be liable for the reasonable fees and expenses of more than one separate counsel (together with local counsel), representing the indemnified parties who are parties to such action), which counsel (together with any local counsel) for the indemnified parties shall be selected by the Representatives (in the case of counsel for the indemnified parties referred to in Section 9(a) above) or by the Company (in the case of counsel for the indemnified parties referred to in Section 9(b) above)) or (ii) the indemnifying party shall not have employed counsel reasonably satisfactory to the indemnified party to represent the indemnified party within a reasonable time after notice of commencement of the action or (iii) the indemnifying party has authorized in writing the employment of counsel for the indemnified party at the expense of the indemnifying party, in each of which cases the fees and expenses of counsel shall be at the expense of the indemnifying party and shall be paid as they are incurred.

(d) *Settlements*. The indemnifying party under this Section 9 shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. Notwithstanding the foregoing sentence, if at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel as contemplated by Section 9(c) hereof, the indemnifying party shall be liable for any settlement of any proceeding effected without its written consent if (i) such settlement is entered into more than 60 days after receipt by such indemnifying party of the aforesaid request and (ii) such indemnifying party shall not have reimbursed the indemnified party in accordance with such request prior to the date of such settlement. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is or could have been a party and indemnity was or could have been sought hereunder by such indemnified party, unless such settlement, compromise or consent includes an unconditional release of such indemnified party from all liability on claims that are the subject matter of such action, suit or proceeding and does not include an admission of fault or culpability or a failure to act by or on behalf of such indemnified party.

Section 10. Contribution. If the indemnification provided for in Section 9 is for any reason held to be unavailable to or otherwise insufficient to hold harmless an indemnified party in respect of any losses, claims, damages, liabilities or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount paid or payable by such indemnified party, as incurred, as a result of any losses, claims, damages, liabilities or expenses referred to therein (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriters, on the other hand, from the offering of the Offered Shares pursuant to this Agreement or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and the Underwriters, on the other hand, in connection with the statements or omissions which resulted in such losses, claims, damages, liabilities or expenses, as well as

any other relevant equitable considerations. The relative benefits received by the Company, on the one hand, and the Underwriters, on the other hand, in connection with the offering of the Offered Shares pursuant to this Agreement shall be deemed to be in the same respective proportions as the total proceeds from the offering of the Offered Shares pursuant to this Agreement (before deducting expenses) received by the Company, and the total underwriting discounts and commissions received by the Underwriters, in each case as set forth on the front cover page of the Prospectus, bear to the aggregate initial public offering price of the Offered Shares as set forth on such cover. The relative fault of the Company, on the one hand, and the Underwriters, on the other hand, shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company, on the one hand, or the Underwriters, on the other hand, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

The amount paid or payable by a party as a result of the losses, claims, damages, liabilities and expenses referred to above shall be deemed to include, subject to the limitations set forth in Section 9(c), any legal or other fees or expenses reasonably incurred by such party in connection with investigating or defending any action or claim. The provisions set forth in Section 9(c) with respect to notice of commencement of any action shall apply if a claim for contribution is to be made under this Section 10; *provided, however,* that no additional notice shall be required with respect to any action for which notice has been given under Section 9(c) for purposes of indemnification.

The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 10 were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to in this Section 10.

Notwithstanding the provisions of this Section 10, no Underwriter shall be required to contribute any amount in excess of the underwriting discounts and commissions received by such Underwriter in connection with the Offered Shares underwritten by it and distributed to the public. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations to contribute pursuant to this Section 10 are several, and not joint, in proportion to their respective underwriting commitments as set forth opposite their respective names on Schedule A. For purposes of this Section 10, each affiliate, director, officer, employee and agent of an Underwriter and each person, if any, who controls an Underwriter within the meaning of the Securities Act or the Exchange Act shall have the same rights to contribution as such Underwriter, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of the Securities Act and the Exchange Act shall have the same rights to contribution as the Company.

Section 11. Default of One or More of the Several Underwriters. If, on the First Closing Date or any Option Closing Date, any one or more of the several Underwriters shall fail or refuse to purchase Offered Shares that it or they have agreed to purchase hereunder on such date, and the aggregate number of Offered Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase does not exceed 10% of the aggregate number of the Offered Shares to be purchased on such date, the Representatives may make arrangements satisfactory to the Company for the purchase of such Offered Shares by other persons, including any of the Underwriters, but if no such arrangements are made by such date, the other Underwriters shall be obligated, severally and not jointly, in the proportions that the number of Firm Shares set forth opposite their respective names on Schedule A bears to the aggregate number of Firm Shares set forth opposite the names of all such non-defaulting Underwriters, or in such other proportions as may be specified by the Representatives with the consent of the non-defaulting

Underwriters, to purchase the Offered Shares which such defaulting Underwriter or Underwriters agreed but failed or refused to purchase on such date. If, on the First Closing Date or any Option Closing Date any one or more of the Underwriters shall fail or refuse to purchase Offered Shares and the aggregate number of Offered Shares with respect to which such default occurs exceeds 10% of the aggregate number of Offered Shares to be purchased on such date, and arrangements satisfactory to the Representatives and the Company for the purchase of such Offered Shares are not made within 48 hours after such default, this Agreement shall terminate without liability of any party to any other party except that the provisions of Section 4, Section 9 and Section 10 shall at all times be effective and shall survive such termination. In any such case either the Representatives or the Company shall have the right to postpone the First Closing Date or the applicable Option Closing Date, as the case may be, but in no event for longer than seven days in order that the required changes, if any, to the Registration Statement and the Prospectus or any other documents or arrangements may be effected.

As used in this Agreement, the term "**Underwriter**" shall be deemed to include any person substituted for a defaulting Underwriter under this Section 11. Any action taken under this Section 11 shall not relieve any defaulting Underwriter from liability in respect of any default of such Underwriter under this Agreement.

Section 12. Termination of this Agreement. Prior to the purchase of the Firm Shares by the Underwriters on the First Closing Date, this Agreement may be terminated by the Representatives by notice given to the Company if at any time: (i) trading or quotation in any of the Company's securities shall have been suspended or limited by the Commission, a Canadian regulatory authority or by the NASDAQ; (ii) trading in securities generally on either the NASDAQ or the NYSE shall have been suspended or limited, or minimum or maximum prices shall have been generally established on any of such stock exchanges; (iii) a general banking moratorium shall have been declared by any federal, New York or Canadian federal authorities; (iv) there shall have occurred any outbreak or escalation of national or international hostilities or any crisis or calamity, or any change in the United States or international financial markets, or any substantial change or development involving a prospective substantial change in United States' or international political, financial or economic conditions, as in the judgment of the Representatives is material and adverse and makes it impracticable to market the Offered Shares in the manner and on the terms described in the Time of Sale Prospectus or the Prospectus or to enforce contracts for the sale of securities; (v) in the judgment of the Representatives there shall have occurred any Material Adverse Change; or (vi) the Company shall have sustained a loss by strike, fire, flood, earthquake, accident or other calamity of such character as in the judgment of the Representatives may interfere materially with the conduct of the business and operations of the Company regardless of whether or not such loss shall have been insured. If the purchase of the Offered Shares by the Underwriters is not consummated for any reason other than due to a termination pursuant to clauses (ii), (iii) or (iv) of this Section 12 or because of the termination of this Agreement pursuant to Section 11 hereof, the Company shall be obligated to reimburse the expenses of the Representatives and the Underwriters pursuant to Section 4 or Section 7 hereof. Any termination pursuant to this Section 12 shall be without liability on the part of any Underwriter to the Company. For the avoidance of doubt, the provisions of Section 9 and Section 10 shall at all times be effective and shall survive such termination.

Section 13. No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (a) the purchase and sale of the Offered Shares pursuant to this Agreement, including the determination of the public offering price of the Offered Shares and any related discounts and commissions, is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other hand, (b) in connection with the offering contemplated hereby and the process leading to such transaction, each Underwriter is and has been acting solely as a principal and is not the agent or fiduciary of the Company, or the Company's shareholders, or its creditors, employees or any other party, (c) no Underwriter has assumed or will assume an advisory or fiduciary responsibility in favor

of the Company with respect to the offering contemplated hereby or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company on other matters) and no Underwriter has any obligation to the Company with respect to the offering contemplated hereby except the obligations expressly set forth in this Agreement, (d) the Underwriters and their respective affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company, and (e) the Underwriters have not provided any legal, accounting, regulatory or tax advice with respect to the offering contemplated hereby and the Company has consulted its own legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

Section 14. Representations and Indemnities to Survive Delivery. The respective indemnities, agreements, representations, warranties and other statements of the Company, of its officers, and of the several Underwriters set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of any Underwriter or the Company or any of its or their partners, officers or directors or any controlling person, as the case may be, and, anything herein to the contrary notwithstanding, will survive delivery of and payment for the Offered Shares sold hereunder and any termination of this Agreement.

Section 15. Notices. All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied and confirmed to the parties hereto as follows:

If to the Representatives:	Jefferies LLC 520 Madison Avenue New York, New York 10022 Facsimile: (646) 619-4437 Attention: General Counsel
	Wells Fargo Securities, LLC 375 Park Avenue New York, New York 10152 Facsimile: (212) 214-5918 Attention: Equity Syndicate Department
with a copy to:	Cooley LLP 4401 Eastgate Mall San Diego, California 92121 Facsimile: (858) 550-6420 Attention: Charles S. Kim
If to the Company:	Xenon Pharmaceuticals Inc. 3650 Gilmore Way Burnaby, British Columbia V5G 4W8 Facsimile: (604) 484-3450 Attention: General Counsel and Corporate Secretary
with a copy to:	Wilson Sonsini Goodrich & Rosati, Professional Corporation 650 Page Mill Road Palo Alto, California 94304 Facsimile: (650) 493-6811 Attention: Jeffrey D. Saper

Any party hereto may change the address for receipt of communications by giving written notice to the others.

Section 16. Successors. This Agreement will inure to the benefit of and be binding upon the parties hereto, including any substitute Underwriters pursuant to Section 11 hereof, and to the benefit of the affiliates, directors, officers, employees, agents and controlling persons referred to in Section 9 and Section 10, and in each case their respective successors, and personal representatives, and no other person will have any right or obligation hereunder. The term "**successors**" shall not include any purchaser of the Offered Shares as such from any of the Underwriters merely by reason of such purchase.

Section 17. Partial Unenforceability. The invalidity or unenforceability of any section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph or provision hereof. If any section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

Section 18. Governing Law Provisions; Currency Provisions. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York applicable to agreements made and to be performed in such state. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby ("**Related Proceedings**") may be instituted in the New York Courts, and each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court (a "**Related Judgment**"), as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party's address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the New York Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum. The Company has irrevocably appointed its General Counsel pursuant to a Form U-2 Uniform Consent to Service of Process filed with the Secretary of State of the State of New York, as its agent to receive service of process or other legal summons for purposes of any such suit, action or proceeding that may be instituted in any state or federal court in the Borough of Manhattan in the City of New York.

With respect to any Related Proceeding, each party irrevocably waives, to the fullest extent permitted by applicable law, all immunity (whether on the basis of sovereignty or otherwise) from jurisdiction, service of process, attachment (both before and after judgment) and execution to which it might otherwise be entitled in the New York Courts, and with respect to any Related Judgment, each party waives any such immunity in the New York Courts or any other court of competent jurisdiction, and will not raise or claim or cause to be pleaded any such immunity at or in respect of any such Related Proceeding or Related Judgment, including, without limitation, any immunity pursuant to the United States Foreign Sovereign Immunities Act of 1976, as amended.

The obligations of the Company pursuant to this Agreement in respect of any sum due to any Underwriter shall, notwithstanding any judgment in a currency other than United States dollars, not be discharged until the first business day following receipt by any Underwriter of any sum adjudged to be so due in such other currency, on which such Underwriter may in accordance with normal banking procedures purchase United States dollars with such other currency. If the United States dollars so purchased are less than the sum originally due to such Underwriter in United States dollars hereunder, the Company agrees as a separate obligation and notwithstanding any such judgment, to indemnify such Underwriter against such loss. If the United States dollars so purchased are greater than the sum originally due to such Underwriter hereunder, such Underwriter agrees to pay to the Company an amount equal to the excess of the dollars so purchased over the sum originally due to such Underwriter hereunder.

All payments made by the Company under this Agreement, if any, will be made without withholding or deduction for or on account of any present or future taxes, duties, assessments or governmental charges of whatever nature (other than taxes on net income) imposed or levied by or on behalf of Canada or any political subdivision or any taxing authority thereof or therein unless the Company is or becomes required by law to withhold or deduct such taxes, duties, assessments or other governmental charges. In such event, the Company will pay such additional amounts as will result, after such withholding or deduction, in the receipt by each Underwriter and each person controlling any Underwriter, as the case may be, of the amounts that would otherwise have been receivable in respect thereof.

Section 19. General Provisions. This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

Each of the parties hereto acknowledges that it is a sophisticated business person who was adequately represented by counsel during negotiations regarding the provisions hereof, including, without limitation, the indemnification provisions of Section 9 and the contribution provisions of Section 10, and is fully informed regarding said provisions. Each of the parties hereto further acknowledges that the provisions of Section 9 and Section 10 hereof fairly allocate the risks in light of the ability of the parties to investigate the Company, its affairs and its business in order to assure that adequate disclosure has been made in the Registration Statement, any preliminary prospectus, the Time of Sale Prospectus, each free writing prospectus and the Prospectus (and any amendments and supplements to the foregoing), as contemplated by the Securities Act and the Exchange Act.

[*signature page follows***]**

If the foregoing is in accordance with your understanding of our agreement, kindly sign and return to the Company the enclosed copies hereof, whereupon this instrument, along with all counterparts hereof, shall become a binding agreement in accordance with its terms.

Very truly yours,

XENON PHARMACEUTICALS INC.

By: _____
Name:
Title:

The foregoing Underwriting Agreement is hereby confirmed and accepted by the Representatives in New York, New York as of the date first above written.

JEFFERIES LLC
WELLS FARGO SECURITIES, LLC
Acting individually and as Representatives of the several
Underwriters named in the attached Schedule A.

JEFFERIES LLC

By: _____
Name:
Title:

WELLS FARGO SECURITIES, LLC

By: _____
Name:
Title:

Schedule A

Underwriters	Number of Firm Shares to be Purchased
Jefferies LLC	[—]
Wells Fargo Securities, LLC	[—]
Canaccord Genuity Inc.	[—]
Total	[—]

Schedule B

Free Writing Prospectuses Included in the Time of Sale Prospectus

Pricing Information Included in the Time of Sale Prospectus

Price per share to the public:	$[—]
Number of shares being sold by the Company:	[—]
Number of shares potentially issuable pursuant to the option to purchase additional shares:	[—]

Schedule C

Permitted Section 5(d) Communications

Form of Opinion of U.S. Company Counsel

Form of Opinion of Canadian Company Counsel

Exhibit B

Form of Lock-up Agreement

[***date***]

Jefferies LLC
Wells Fargo Securities, LLC
As Representatives of the Several Underwriters

c/o Jefferies LLC
520 Madison Avenue
New York, New York 10022

and

c/o Wells Fargo Securities, LLC
375 Park Avenue
New York, New York 10152

RE: Xenon Pharmaceuticals Inc. (the "**Company**")

Ladies & Gentlemen:

The undersigned is an owner of common shares of the Company ("**Shares**") or of Related Securities of the Company. The Company proposes to conduct a public offering of Shares (the "**Offering**") for which Jefferies LLC and Wells Fargo Securities, LLC (collectively, the "**Representatives**") will act as the representatives of the underwriters. The undersigned recognizes that the Offering will benefit each of the Company and the undersigned. The undersigned acknowledges that the underwriters are relying on the representations and agreements of the undersigned contained in this letter agreement in conducting the Offering and, at a subsequent date, in entering into an underwriting agreement (the "**Underwriting Agreement**") and other underwriting arrangements with the Company with respect to the Offering.

Annex A sets forth definitions for capitalized terms used in this letter agreement that are not defined in the body of this letter agreement. Those definitions are a part of this letter agreement.

In consideration of the foregoing, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned hereby agrees that, during the Lock-up Period, the undersigned will not (and will use best efforts to cause any Family Member not to), without the prior written consent of the Representatives, which may withhold their consent in their sole discretion:

- Sell or Offer to Sell any Shares or Related Securities currently or hereafter owned either of record or beneficially (as defined in Rule 13d-3 under the Exchange Act) by the undersigned or such Family Member,
- enter into any Swap,

- make any demand for, or exercise any right with respect to, the registration under the Securities Act of the offer and sale of any Shares or Related Securities, or cause to be filed a registration statement, prospectus or prospectus supplement (or an amendment or supplement thereto) with respect to any such registration, or
- publicly announce any intention to do any of the foregoing.

The foregoing will not apply to the registration of the offer and sale of the Shares, and the sale of the Shares to the underwriters, in each case as contemplated by the Underwriting Agreement. In addition, the foregoing restrictions shall not apply to (i) Shares or Related Securities acquired in open market transactions on or after the date of the final prospectus relating to the Offering (the "**Prospectus**"), *provided that* prior to the expiration of the Lock-up Period, no public disclosure or filing under the Exchange Act shall be required, or made voluntarily, reporting a reduction in beneficial ownership of Shares or Related Securities in connection with any transfer of such Shares or Related Securities; (ii) the receipt of Shares or Related Securities in connection with the vesting of restricted stock or the exercise of options to purchase Shares or Related Securities, including any transfer for the payment of taxes due as a result of such vesting or exercise, whether by means of "net settlement" or otherwise (provided any such transfer shall only be permitted to the Company), insofar as such option or restricted stock is issued pursuant to an employee benefit plan disclosed in the Prospectus, *provided that* any such Shares or Related Securities received upon such vesting or exercise shall be subject to the terms of this letter agreement and no public disclosure or filing under the Exchange Act shall be required or shall be voluntarily made within 30 days after the date of the Prospectus, and after such 30th day, any filing under Section 16(a) of the Exchange Act shall clearly indicate in the footnotes thereto that (A) the filing relates to the circumstances described in this clause (ii), (B) no Shares or Related Securities were sold by the reporting person, and (C) the Shares or Related Securities received upon exercise of such options are subject to the terms of this letter agreement; (iii) the transfer of Shares or Related Securities to the Company in connection with the repurchase of Shares issued pursuant to an employee benefit plan; (iv) the transfer of Shares or Related Securities pursuant to a *bona fide* third-party tender offer, merger, consolidation or other similar transaction made to all holders of the Company's securities involving a change of control of the Company, *provided that* in the event that such tender offer, merger, consolidation or other such transaction is not completed, the Shares and Related Securities held by the undersigned shall remain subject to the provisions of this letter agreement; (v) the conversion of the outstanding preferred shares of the Company into Shares, *provided that* any such Shares received upon such conversion shall be subject to the terms of this letter agreement; (vi) the transfer of Shares or Related Securities solely by operation of law, such as pursuant to a qualified domestic order or in connection with a divorce settlement, *provided that* each transferee executes and delivers to the Representatives an agreement stating that such transferee is receiving and holding such Shares and/or Related Securities subject to the provisions of this letter agreement and agrees not to Sell or Offer to Sell such Shares and/or Related Securities, engage in any Swap or engage in any other activities restricted under this letter agreement except in accordance with this letter agreement (as if such transferee had been an original signatory hereto); (vii) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity the transfer of Shares or Related Securities (A) to another corporation, partnership, limited liability company, trust or other business entity that is a direct or indirect affiliate (as defined in Rule 405 promulgated under the Securities Act) of the undersigned or (B) as part of a distribution without consideration by the undersigned to its shareholders, partners, members or other equity holders; (viii) the transfer of Shares or Related Securities by gift, or by will or intestate succession; and (ix) the transfer of Shares or Related Securities to a Family Member or to a trust whose beneficiaries consist exclusively of one or more of the undersigned (or, if the undersigned is a trust, to any trustee or beneficiary of the undersigned) and/or a Family Member; *provided, however*, that in the case of clauses (vii), (viii) and (ix), it shall be a condition to such transfer that:

- each transferee executes and delivers to the Representatives an agreement stating that such transferee is receiving and holding such Shares and/or Related Securities subject to the

provisions of this letter agreement and agrees not to Sell or Offer to Sell such Shares and/or Related Securities, engage in any Swap or engage in any other activities restricted under this letter agreement except in accordance with this letter agreement (as if such transferee had been an original signatory hereto), and

- prior to the expiration of the Lock-up Period, no public disclosure or filing under the Exchange Act by any party to the transfer (donor, donee, transferor or transferee) shall be required, or made voluntarily, reporting a reduction in beneficial ownership of Shares in connection with such transfer.

The undersigned may enter into a written plan meeting the requirements of Rule 10b5-1 under the Exchange Act relating to the sale of Shares or Related Securities of the Company, *provided that* the Shares or Related Securities subject to such plan may not be sold and no public disclosure of any such plan shall be required or shall be voluntarily made by any person until after the expiration of the Lock-up Period.

If the undersigned is an officer or director of the Company, the undersigned further agrees that the foregoing provisions shall be equally applicable to any Company-directed Shares the undersigned may purchase or otherwise receive in the Offering (including pursuant to a directed share program).

In addition, if the undersigned is an officer or director of the Company, (i) the Representatives agree that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of Shares or Related Securities, the Representatives will notify the Company of the impending release or waiver, and (ii) the Company (in accordance with the provisions of the Underwriting Agreement) will announce the impending release or waiver by press release through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by the Representatives hereunder to any such officer or director shall only be effective two business days after the publication date of such press release. The provisions of this paragraph will not apply if both (a) the release or waiver is effected solely to permit a transfer not for consideration and (b) the transferee has agreed in writing to be bound by the same terms described in this letter agreement that are applicable to the transferor to the extent and for the duration that such terms remain in effect at the time of the transfer.

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of Shares or Related Securities held by the undersigned and the undersigned's Family Members, if any, except in compliance with the foregoing restrictions.

With respect to the Offering only, the undersigned waives any registration rights relating to registration under the Securities Act of the offer and sale of any Shares and/or any Related Securities owned either of record or beneficially by the undersigned, including any rights to receive notice of the Offering.

The undersigned confirms that the undersigned has not, and has no knowledge that any Family Member has, directly or indirectly, taken any action designed to or that might reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale of the Shares. The undersigned will not take, and will use best efforts to cause any Family Member not to take, directly or indirectly, any such action.

Whether or not the Offering occurs as currently contemplated or at all depends on market conditions and other factors. The Offering will only be made pursuant to the Underwriting Agreement, the terms of which are subject to negotiation between the Company and the underwriters.

The undersigned hereby represents and warrants that the undersigned has full power, capacity and authority to enter into this letter agreement. This letter agreement is irrevocable and will be binding on the

undersigned and the successors, heirs, personal representatives and assigns of the undersigned. This letter agreement shall lapse and become null and void, and the undersigned shall be released from all obligations under this letter agreement, if (i) the Company notifies the Representatives in writing that it does not intend to proceed with the Offering, (ii) the Underwriting Agreement is not executed on or before March 31, 2014 (provided that the Company may by written notice to the undersigned prior to March 31, 2014, extend such date for a period of up to an additional three months) or (iii) if the Underwriting Agreement (other than the provisions thereof that survive termination) shall terminate or be terminated prior to payment for, and delivery of, the Firm Shares (as defined therein) to be sold thereunder, whichever of clauses (i), (ii) and (iii) occurs first.

This letter agreement shall be governed by, and construed in accordance with, the laws of the State of New York, without regard to the conflict of laws principles thereof.

[*signature page follows*]

Very truly yours,

Name of Security Holder *(Print exact name)*

By: _____
Signature

If not signing in an individual capacity:

Name of Authorized Signatory *(Print*)

Title of Authorized Signatory *(Print*)

(indicate capacity of person signing if signing as custodian, trustee, or on behalf of an entity)

Certain Defined Terms
Used in Lock-up Agreement

For purposes of the letter agreement to which this Annex A is attached and of which it is made a part:

- "**Call Equivalent Position**" shall have the meaning set forth in Rule 16a-1(b) under the Exchange Act.
- "**Exchange Act**" shall mean the Securities Exchange Act of 1934, as amended.
- "**Family Member**" shall mean the spouse of the undersigned, an immediate family member of the undersigned or an immediate family member of the undersigned's spouse, in each case living in the undersigned's household or whose principal residence is the undersigned's household (regardless of whether such spouse or family member may at the time be living elsewhere due to educational activities, health care treatment, military service, temporary internship or employment or otherwise).
- "**Immediate family member**" as used above shall have the meaning set forth in Rule 16a-1(e) under the Exchange Act.
- "**Lock-up Period**" shall mean the period beginning on the date hereof and continuing through the close of trading on the date that is 180 days after the date of the Prospectus.
- "**Put Equivalent Position**" shall have the meaning set forth in Rule 16a-1(h) under the Exchange Act.
- "**Related Securities**" shall mean any options or warrants or other rights to acquire Shares or any securities exchangeable or exercisable for or convertible into Shares, or to acquire other securities or rights ultimately exchangeable or exercisable for or convertible into Shares.
- "**Securities Act**" shall mean the Securities Act of 1933, as amended.
- "**Sell or Offer to Sell**" shall mean to:
    - sell, offer to sell, contract to sell or lend,
    - effect any short sale or establish or increase a Put Equivalent Position or liquidate or decrease any Call Equivalent Position,
    - pledge, hypothecate or grant any security interest in, or
    - in any other way transfer or dispose of,

  in each case whether effected directly or indirectly.
- "**Swap**" shall mean any swap, hedge or similar arrangement or agreement that transfers, in whole or in part, the economic risk of ownership of Shares or Related Securities, regardless of whether any such transaction is to be settled in securities, in cash or otherwise.

Capitalized terms not defined in this Annex A shall have the meanings given to them in the body of this lock-up agreement.

Industry Canada Industrie Canada

Canada Business Corporations Act **(CBCA)**
FORM 7
RESTATED ARTICLES OF INCORPORATION
(Section 180)

1 - Corporate name

XENON PHARMACEUTICALS INC.

2 - Corporation number

3 7 5 8 6 5 – 6

3 - The province or territory in Canada where the registered office is situated *(do not indicate the full address)*

British Columbia

4 - The classes and any maximum number of shares that the corporation is authorized to issue

See attached Schedule A

5 - Restrictions, if any, on share transfers

Not Applicable

6 - Minimum and maximum number of directors *(for a fixed number of directors, please indicate the same number in both boxes)*

Minimum number 1 **Maximum number** 10

7 - Restrictions, if any, on the business the corporation may carry on

Not Applicable

8 - Other provisions, if any

See attached Schedule B

9 - Declaration

I hereby certify that I am a director or authorized officer of the corporation and that these restated articles of incorporation correctly set out, without substantive change, the corresponding provisions of the articles of incorporation as amended and supersede the original articles of incorporation.

Signature:

Print name: Karen Corraini *Telephone number:* 604-484-3300

Note: Misrepresentation constitutes an offence and, on summary conviction, a person is liable to a fine not exceeding $5000 or to imprisonment for a term not exceeding six months or to both (subsection 250(1) of the CBCA).

Canada

Industry Canada Industrie Canada

Instructions
FORM 7
RESTATED ARTICLES OF INCORPORATION

Filing this application costs $50.
No fee applicable if filed the same day as a request for a Certificate of Amendment.

You are providing information required by the CBCA. Note that both the CBCA and the *Privacy Act* allow this information to be disclosed to the public. It will be stored in personal information bank number IC/PPU-049.

Restated Articles of Incorporation are used to consolidate, into one document, all the amendments made to a corporation's articles since its creation. The articles must set out, without substantive change, the articles of incorporation as previously amended. The restated certificate of incorporation will supersede the original articles of incorporation and all amendments to those articles. If the space available is insufficient, attach a schedule.

Item 4
Set out the details required by paragraph 6(1)(c) of the CBCA, including details of the rights, privileges, restrictions and conditions attached to each class of shares. All shares must be without nominal or par value and must comply with the provisions of Part V of the CBCA.

Item 6
State the number of directors. If cumulative voting is permitted, the number of directors must be fixed.

Item 7
If restrictions are to be placed on the business the corporation may carry on, set out the restrictions .

Item 8
Set out any provisions permitted by the Act or Regulations to be set out in the by-laws of the corporation that are to form part of the articles, including any pre-emptive rights or cumulative voting provisions.

Item 9
This form must be signed by a director or authorized officer of the corporation.

For more information, consult Corporations Canada Website (corporationscanada.ic.gc.ca) or call toll-free (within Canada) **1-866-333-5556 or** (from outside Canada) **(613) 941-9042**.

Send documents:

By mail: Corporations Canada
235 Queen Street
Ottawa, Ontario K1A 0H5

By facsimile: (613) 941-4803

By e-mail: corporationscanada@ic.gc.ca

Canada

SCHEDULE A

XENON PHARMACEUTICALS INC.
RESTATED ARTICLES OF INCORPORATION

1. Unlimited number of common shares; and
2. Unlimited number of preferred shares issuable in series,

all having the rights, privileges, restrictions and conditions shown in Exhibit 1 attached hereto.

EXHIBIT 1

1. The common shares (the "**Common Shares**") shall, as a class, have attached thereto the following rights, privileges, restrictions and conditions:

(a) Voting

The holders of Common Shares shall be entitled to receive notice of and to attend at and to vote in person or by proxy at any general meetings of the shareholders of the Corporation and, at any general meeting of the shareholders of the Corporation, shall be entitled to one vote for each such Common Share held.

(b) Dividends

Subject to the priority rights of any other class of shares, the holders of Common Shares shall be entitled to receive, and the Corporation shall pay out of monies of the Corporation properly applicable to the payment of dividends, those dividends as the directors may in their absolute discretion declare from time to time.

(c) Capital Distribution

In the event of the liquidation, dissolution or winding-up of the Corporation or other distribution of assets of the Corporation among its shareholders for the purpose of winding-up its affairs (whether voluntary or involuntary) or upon a reduction of capital (any of which events are hereinafter referred to as a "Capital Distribution"), the holders of Common Shares shall, subject to the priority rights of any other class of shares, be entitled to receive any further distribution of the property and assets of the Corporation on a pro rata basis per share.

2**.** The preferred shares (the "**Preferred Shares**") shall, as a class, have attached thereto the following rights, privileges, restrictions and conditions:

(a) Directors' Authority to Issue in One or More Series

The directors of the Corporation may issue the Preferred Shares at any time and from time to time in one or more series. Before any shares of a particular series are issued, the directors of the Corporation shall fix the number of shares that will form such series and shall determine, subject to the limitations set out in the articles, the designation, rights, privileges, restrictions and conditions to be attached to the Preferred Shares of such series, including, but without in any way limiting or restricting the generality of the foregoing, the rate or rates, amount or method or methods of calculation of dividends thereon, the currency or currencies of payment of dividends, the time and place of payment of dividends, the consideration and the terms and conditions of any purchase for cancellation, retraction or redemption rights (if any), the conversion or exchange rights attached thereto (if any), the voting rights attached thereto (if any) and the terms and conditions of any share purchase plan or sinking fund with respect thereto. Before the issue of the first shares of a series, the directors shall send to the Director (as defined in the *Canada Business Corporations Act*) articles of amendment containing a

description of such series including the designation, rights, privileges, restrictions and conditions determined by the directors.

(b) Ranking of Preferred Shares

No rights, privileges, restrictions or conditions attached to a series of Preferred Shares shall confer upon a series a priority in respect of dividends or return of capital over any other series of Preferred Shares. The Preferred Shares shall be entitled to priority over the Common Shares of the Corporation and over any other shares ranking junior to the Preferred Shares with respect to priority in the payment of dividends and the distribution of assets in the event of the liquidation, dissolution or winding-up of the Corporation, whether voluntary or involuntary, or any other distribution of the assets of the Corporation among its shareholders for the purpose of winding up its affairs. If any cumulative dividends or amounts payable on a return of capital in respect of a series of Preferred Shares are not paid in full, the Preferred Shares of all series shall participate rateably in respect of such dividends, including accumulations, if any, in accordance with the sums that would be payable on such shares if all such dividends were declared and paid in full, and in respect of any repayment of capital in accordance with the sums that would be payable on such repayment of capital if all sums so payable were paid in full; provided, however, that in the event of there being insufficient assets to satisfy in full all such claims as aforesaid, the claims of the holders of the Preferred Shares with respect to repayment of capital shall first be paid and satisfied and any assets remaining thereafter shall be applied towards the payment and satisfaction of claims in respect of dividends. The Preferred Shares of any series may also be given such other preferences not inconsistent with clauses (a) to (d) hereof over the Common Shares and over any other shares ranking junior to the Preferred Shares as may be determined in the case of such series of Preferred Shares.

(c) Voting Rights

Except as hereinafter referred to or as otherwise provided by law or in accordance with any voting rights which may from time to time be attached to any series of Preferred Shares, the holders of the Preferred Shares as a class shall not be entitled as such to receive notice of, to attend or to vote at any meeting of the shareholders of the Corporation.

(d) Approval of Holders of Preferred Shares

The rights, privileges, restrictions and conditions attaching to the Preferred Shares as a class may be added to, changed or removed but only with the approval of the holders of Preferred Shares given as hereinafter specified.

The approval of the holders of Preferred Shares to add to, change or remove any right, privilege, restriction or condition attaching to the Preferred Shares as a class or any other matter requiring the consent of the holders of the Preferred Shares as a class may be given in such manner as may then be required by law, subject to a minimum requirement that such approval be given by resolution passed by the affirmative vote of at least 2/3 of the votes cast at a meeting of the holders of Preferred Shares duly called for that purpose. The formalities to be observed in respect of the giving of notice of any such meeting or any adjourned meeting and the conduct hereof shall be those from time to time prescribed by the *Canada Business Corporations*

Act (as from time to time amended, varied or replaced) and the by-laws of the Corporations with respect to meetings of shareholders. On every poll taken at a meeting of holders of Preferred Shares as a class, or at a joint meeting of the holders of two or more series of Preferred Shares, each holder of Preferred Shares entitled to vote thereat shall have 1 vote in respect of each Preferred Share held by him/her.

SCHEDULE B

XENON PHARMACEUTICALS INC.
RESTATED ARTICLES OF INCORPORATION

Subject to the provisions of the *Canada Business Corporations Act*, the directors may, between annual general meetings appoint one or more additional directors to serve until the next annual general meeting, but the number of additional directors shall not at any time exceed one-third (1/3) of the number of directors who hold office at the expiration of the last annual general meeting. The actual number of directors between the minimum of one (1) and maximum of ten (10) shall be fixed from time to time by the board of directors of the Corporation.

Exhibit 4.1

SUBJECT TO THE CANADA BUSINESS CORPORATIONS ACT

XENON PHARMACEUTICALS INC.

NUMBER

GC4315495

SHARES

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This Certifies That

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FULLY PAID AND NON-ASSESSABLE COMMON SHARES WITHOUT NOMINAL OR PAR VALUE

XENON PHARMACEUTICALS INC.

transferable only on the books of the Corporation by the registered holder hereof in person or by Attorney duly authorized in writing upon surrender of this certificate properly endorsed.

This certificate is not valid until countersigned and registered by the Registrar and Transfer Agent duly authorized by the Corporation.

IN WITNESS WHEREOF the corporation has caused this Certificate to be signed by the facsimile signature of its duly authorized officers.

DATED: OCTOBER 03, 2014

Chief Financial Officer

COUNTERSIGNED AND REGISTERED
CST TRUST COMPANY
TRANSFER AGENT AND REGISTRAR

VANCOUVER
TORONTO

BY:______________________________
Authorized Signature

General Counsel and Corporate Secretary

The shares represented by this certificate are transferable at the offices CST Trust Company in Vancouver, British Columbia and Toronto, Ontario.

Printed by DATA BUSINESS FORMS

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4315495

SECURITY INSTRUCTIONS - INSTRUCTIONS DE SÉCURITÉ

THIS IS WATERMARKED PAPER. DO NOT ACCEPT WITHOUT NOTING WATERMARK. HOLD TO LIGHT TO VERIFY WATERMARK.

PAPIER FILIGRANÉ. NE PAS ACCEPTER SANS VÉRIFIER LA PRÉSENCE DU FILIGRANE. POUR CE FAIRE, PLACER À LA LUMIÈRE.

For value received, the undersigned hereby sell(s), assign(s) and transfer(s) unto

_____

(Print name(s) of person(s) to whom the securities are being transferred and the address for the register)

_____

_____ shares

(number of shares if blank, deemed to be all)

of the Corporation represented by this certificate, and hereby irrevocably constitutes and appoints _____ the attorney of the undersigned to transfer the said securities with full power of substitution in this matter:

Dated _____

Signature Guarantee(s)*
(the transfer cannot be processed without acceptable guarantees of all signatures)

Transferor(s) Signature(s)*

_____

_____

_____

*For transfers signed by the registered holder(s), their signatures(s) must correspond with the name(s) on the certificate in every particular, without changes.

In Canada and the US: a **Medallion Guarantee** obtained from a member of an acceptable Medallion Guarantee Program (STAMP, SEMP or MSP). Many banks, credit unions and broker dealers are members of a Medallion Guarantee Program. The guarantor must affix a stamp in the space above bearing the actual words "Medallion Guaranteed".

In Canada: a **Signature Guarantee** obtained from a major Canadian Schedule I bank that is not a member of a Medallion Guarantee Program. The guarantor must affix a stamp in the space above bearing the actual words "Signature Guaranteed".

Outside Canada and the US: holders must obtain a guarantee from a local financial institution that has a corresponding affiliate in Canada or the US that is a member of an acceptable Medallion Guarantee Program. The corresponding affiliate must over-guarantee the guarantee provided by the local financial institution.

Exhibit 4.2

AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT

THIS AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT (the "Agreement") is made as of the 6th day of December, 2006 and among XENON PHARMACEUTICALS INC., a corporation (the "Company") continued under the Canada Business Corporations Act and the investors listed on Exhibit A and Exhibit B hereto, referred to hereinafter as the "Investors" and each individually as an "Investor" and other shareholders of the Company who have signed an agreement to be bound by this Agreement or the First Investors Rights Agreement.

RECITALS

WHEREAS, the Investors listed in Exhibit A (the "Series B Investors") purchased Series B preferred shares ("Series B Shares") of the Company and entered into an investor rights agreement with the Company (the "First Investor Rights Agreement") as of May 19, 2000;

WHEREAS, the Investors listed in Exhibit B (the "Series E Investors"), other than Novartis Pharma AG ("Novartis"), MX Associates LLP ("MXA"), Lipoterx Ltd. ("Lipoterx"), Takeda Research Investment, Inc. ("TRI") and other subscribers of Series E preferred shares of the Company ("Series E Shares") marked with an asterisk in Exhibit B hereto, purchased Series E Shares pursuant to that certain share purchase agreement dated March 26, 2001 and entered into an investor rights agreement with the Company and the Series B Investors (the "Second Investor Rights Agreement") as of March 26, 2001, which amended and restated the First Investor Rights Agreement;

WHEREAS, Novartis purchased Series E Shares pursuant to a share purchase agreement (the "Novartis Purchase Agreement") dated September 20, 2004 (the "Novartis Financing") and entered into an investor rights agreement with the Company, the then Series B Investors and the then Series E Investors (the "Third Investor Rights Agreement") as of October 26, 2004 which amended and restated the Second Investor Rights Agreement;

WHEREAS, MXA and Lipoterx (collectively, the "Investor Group") purchased Series E Shares pursuant to a share purchase agreement (the "Investor Group Purchase Agreement") dated February 27, 2006 and entered into an investor rights agreement with the Company, the Series B Investors, and the then Series E Investors (the "Fourth Investor Rights Agreement") as of April 10, 2006 which amended and restated the Third Investor Rights Agreement;

WHEREAS, TRI purchased Series E Shares pursuant to a share purchase agreement (the "TRI Purchase Agreement") dated May 19, 2006 and entered into an investor rights agreement with the Company, the then Series B Investors, the then Series E Investors, Novartis and the Investor Group (the "Fifth Investor Rights Agreement") as of June 30, 2006 which amended and restated the Fourth Investor Rights Agreement;

WHEREAS, Takeda purchased Series E Shares pursuant to a share purchase agreement (the "Takeda Purchase Agreement") dated September 28, 2006 (the "Takeda Financing");

WHEREAS, Roche Finance Ltd. ("Roche") purchased Series E Shares pursuant to a share purchase agreement (the "Roche Purchase Agreement") dated November 1, 2006 (the "Roche Financing");

WHEREAS, in connection with the consummation of the Takeda Financing, the parties desire to enter into this Agreement as the Restated and Amended Investor Rights Agreement in order to grant registration, information rights and other rights to the Investors as set forth below.

WHEREAS, in connection with the consummation of the Roche Financing, the parties also desire to enter into this Agreement as the Restated and Amended Investor Rights Agreement in order to grant registration, information rights and other rights to the Investors as set forth below.

NOW THEREFORE, in consideration of these premises and for other good and valid consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

ARTICLE 1
GENERAL

1.1 Definitions

As used in this Agreement the following terms shall have the following respective meanings:

“Articles of the Company” means the articles of the Company as amended from time to time;

“Common Shares” means the Company’s common shares, as they may be renamed or redesignated from, time to time.

“Exchange Act” means the United States Securities Exchange Act of 1934, as amended.

“Form S-3” or “Form F-3” means such form under the Securities Act as in effect on the date hereof or any successor or similar registration form under the Securities Act subsequently adopted by the SEC which permits inclusion or incorporation of substantial information by reference to other documents filed by the Company with the SEC.

“Holder” means any person owning of record Registrable Securities that have not been sold to the public or any assignee of record of such Registrable Securities in accordance with Section 2.10 hereof.

“Initial Offering” means the Company’s first firm commitment underwritten public offering of its Common Shares registered under the Securities Act.

“Register,” “registered,” and “registration” refer to a registration effected by preparing and filing a registration statement in compliance with the Securities Act, and the declaration or ordering of effectiveness of such registration statement or document.

“Registrable Securities” means (a) Common Shares of the Company issued or issuable upon conversion of the Shares; and (b) any Common Shares of the Company issued as (or issuable upon the conversion or exercise of any warrant, right or other security which is issued as) a dividend or other distribution with respect to, or in exchange for or in replacement of, such above-described securities. Notwithstanding the foregoing, Registrable Securities shall not include any securities sold by a person to the public either pursuant to a registration statement or Rule 144 or sold in a private transaction in which the transferor’s rights under Article 2 of this Agreement are not assigned.

"Registrable Securities then outstanding" shall be the number of shares determined by calculating the total number of shares of the Company's Common Shares that are Registrable Securities and either (a) are then issued and outstanding or (b) are issuable pursuant to then exercisable or convertible securities.

"Registration Expenses" shall mean all expenses incurred by the Company in complying with Sections 2.2, 2.3 and 2.4 hereof, including, without limitation, all registration and filing fees, printing expenses, fees and disbursements of counsel for the Company, reasonable fees and disbursements not to exceed twenty-five thousand U.S. dollars ($25,000 U.S.) of a single special counsel for the Holders, blue sky fees and expenses and the expense of any special audits incident to or required by any such registration (but excluding the compensation of regular employees of the Company which shall be paid in any event by the Company).

"SEC" or "Commission" means the United States Securities and Exchange Commission.

"Securities Act" shall mean the United States Securities Act of 1933, as amended.

"Selling Expenses" shall mean all underwriting discounts and selling commissions applicable to the sale.

"Shares" shall mean the Company's Series B Shares held by the Series B Investors and their permitted assigns, the Company's Series E Shares held by the Series E Investors and their permitted assigns, and the Company's Series A preferred shares held by the holders on May 19, 2000 of Series A preferred shares of the Company who have agreed to become parties to and bound by this Agreement as of the date hereof and their permitted assigns.

"Special Registration Statement" shall mean a registration statement relating to any employee benefit plan or with respect to any corporate reorganisation or other transaction under Rule 145 of the Securities Act or other transaction registered in Form S-4 or F-4 (or substantially similar form under the Securities Act).

ARTICLE 2
REGISTRATION; RESTRICTIONS ON TRANSFER

2.1 Restrictions on Transfer.

(a) Each Holder agrees not to make any disposition of all or any portion of the Shares or Registrable Securities unless and until:

(i) There is then in effect a registration statement under the Securities Act covering such proposed disposition and such disposition is made in accordance with such registration statement; or

(ii) (A) The transferee has agreed in writing to be bound by the terms of this Agreement (including, in the case of a transfer of Series E Shares held by Novartis, the provisions of Sections 5.1, 5.2 and 5.3 hereof), (B) such Holder shall have notified the Company of the proposed disposition and shall have furnished the Company with a detailed statement of the circumstances surrounding the proposed disposition, and (C) if reasonably requested by the Company, such Holder shall have furnished the Company with an opinion of counsel, reasonably satisfactory to the Company, that such disposition will not require registration of such shares under the Securities Act.

(iii) Notwithstanding the provisions of paragraphs (i) and (ii) above, no such registration statement or opinion of counsel shall be necessary for a transfer by a Holder (A) which is a partnership to its partners or former partners in accordance with partnership interests, (B) which is a corporation to its shareholders in accordance with their interest in the corporation, (C) which is a limited liability company to its members or former members in accordance with their interest in the limited liability company, (D) to the Holder's family member or trust for the benefit of an individual Holder, or (E) to (I) any limited partnership of which the general partner is under common control with those persons who controlled the Holder or its manager or general partner, as the case may be, as of the date of the transfer; (II) any corporation or other person whose senior officers are, or which is managed by, a corporate manager whose senior officers are common officers of the Holder or its manager or general partner, as the case may be, as of the date of the transfer; (III) to persons who are bona fide investors (including the general partner or fund manager, as the case may be, and any of its associates or affiliates) in the Holder who are entitled to participate in a distribution of the assets of the Holder upon winding up, liquidation or dissolution where the Shares are distributed to them on such occurrence; and (IV) the parent, subsidiary or affiliate of the Holder; provided that in each case the transferee will be subject to the terms of this Agreement to the same extent as if he were an original Holder hereunder; and no such registration statement or agreement, notice, information or opinion of counsel shall be necessary in respect of a disposition that is not subject to the requirements of the Securities Act or is a disposition that does not require registration of such shares under the Securities Act.

(b) Each certificate representing Shares or Registrable Securities, where required by the Company, shall (unless otherwise permitted by the provisions of the Agreement) be stamped or otherwise imprinted with a legend substantially similar to the following (in addition to any legend required under applicable state securities laws):

THE SECURITIES REPRESENTED HEREBY HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 (THE "ACT") AND - MAY NOT BE OFFERED, SOLD OR OTHERWISE TRANSFERRED, ASSIGNED, PLEDGED OR HYPOTHECATED UNLESS AND UNTIL REGISTERED UNDER THE ACT OR UNLESS THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY AND ITS COUNSEL THAT SUCH REGISTRATION IS NOT REQUIRED.

(c) The Company shall be obligated to reissue promptly unlegended certificates at the request of any holder thereof if the holder shall have obtained an opinion of counsel (which counsel may be counsel to the Company) reasonably acceptable to the Company to the effect that the securities proposed to be disposed of may lawfully be so disposed of without registration, qualification or legend.

(d) Any legend endorsed on an instrument pursuant to applicable state securities laws and the stop-transfer instructions with respect to such securities shall be removed upon receipt by the Company of an order of the appropriate blue sky authority authorizing such removal.

2.2 Demand Registration.

(a) Subject to the conditions of this Section 2.2, if the Company shall receive a written request from the Holders of a majority in interest of the Registrable Securities then outstanding (the "Initiating Holders") that the Company file a registration statement under the Securities Act covering the registration of at least a majority of the Registrable Securities then outstanding (or a lesser percent if the anticipated aggregate offering price, net of underwriting discounts and commissions, would exceed Cdn. $5,000,000 (a "Qualified Public Offering")), then the Company shall, within thirty (30) days of the receipt thereof, give written notice of such request to all Holders, and subject to the limitations of this Section 2.2, effect, as expeditiously as reasonably possible, the registration under the Securities Act of all Registrable Securities that the Holders request to be registered.

(b) If the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to this Section 2.2 or any request pursuant to Section 2.4 and the Company shall include such information in the written notice referred to in Section 2.2(a) or Section 2.4(a), as applicable. In such event, the right of any Holder to include its Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by a majority in interest of the Initiating Holders (which underwriter or underwriters shall be reasonably acceptable to the Company). Notwithstanding any other provision of this Section 2.2 or Section 2.4, if the underwriter advises the Company that marketing factors require a limitation of the number of securities to be underwritten (including Registrable Securities) then the Company shall so advise all Holders of Registrable Securities which would otherwise be underwritten pursuant hereto, and the number of shares that may be included in the underwriting shall be allocated to the Holders of such Registrable Securities on a pro rata basis based on the number of Registrable Securities held by all such Holders (including the Initiating Holders); provided, however, that the number of shares of Registrable Securities to be included in such underwriting and registration shall not be reduced unless all other securities of the Company are first entirely excluded from the underwriting and registration. Any Registrable Securities excluded or withdrawn from such underwriting shall be withdrawn from the registration.

(c) The Company shall not be required to effect a registration pursuant to this Section 2.2:

(i) prior to the earlier of (A) the third anniversary of the date of this Agreement or (B) one hundred eighty (180) days following the effective date of the registration statement pertaining to the Initial Offering;

(ii) after the Company has effected two (2) registrations pursuant to this Section 2.2, and such registrations have been declared or ordered effective;

(iii) during the period starting with the date of filing of, and ending on the date one hundred eighty (180) days following the effective date of the registration statement pertaining to a public offering, other than pursuant to a Special Registration Statement; provided that the Company makes reasonable good faith efforts to cause such registration statement to become effective;

(iv) if within thirty (30) days of receipt of a written request from Initiating Holders pursuant to Section 2.2(a), the Company gives notice to the Holders of the Company's intention to make a public offering, other than pursuant to a Special Registration Statement, within ninety (90) days;

(v) if the Company shall furnish to Holders requesting a registration statement pursuant to this Section 2.2, a certificate signed by the Chairman of the Board stating that in the good faith judgment of the Board of Directors of the Company, it would be seriously detrimental to the Company and its shareholders for such registration statement to be effected at such time, in which event the Company shall have the right to defer such filing for a period of not more than ninety (90) days after receipt of the request of the Initiating Holders; provided that such right to delay a request shall be exercised by the Company not more than once in any twelve (12) month period; or

(vi) if the Initiating Holders propose to dispose of shares of Registrable Securities that may be immediately registered on Form S-3 or Form F-3 pursuant to a request made pursuant to Section 2.4 below.

2.3 Piggyback Registrations

The Company shall notify all Holders of Registrable Securities in writing at least twenty (20) days prior to the filing of any registration statement under the Securities Act for purposes of a public offering of securities of the Company (including, but not limited to, registration statements relating to secondary offerings of securities of the Company, but excluding Special Registration Statements) and will afford each such Holder an opportunity to include in such registration statement all or part of such Registrable Securities held by such Holder. Each Holder desiring to include in any such registration statement all or any part of the Registrable Securities held by it shall, within fifteen (15) days after the above-described notice from the Company, so notify the Company in writing. Such notice shall state the intended method of disposition of the Registrable Securities by such Holder. If a Holder decides not to include all of its Registrable Securities in any registration statement thereafter filed by the Company, such Holder shall nevertheless continue to have the right to include any Registrable Securities in any subsequent registration statement or registration statements as may be filed by the Company with respect to offerings of its securities, all upon the terms and conditions set forth herein.

(a) **Underwriting**. If the registration statement under which the Company gives notice under this Section 2.3 is for an underwritten offering, the Company shall so advise the Holders of Registrable Securities. In such event, the right of any such Holder to be included in a registration pursuant to this Section 2.3 shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting to the extent provided herein. All Holders

proposing to distribute their Registrable Securities through such underwriting shall enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by the Company. Notwithstanding any other provision of the Agreement, if the underwriter determines in good faith that marketing factors require a limitation of the number of shares to be underwritten, the number of shares that may be included in the underwriting shall be allocated, first, to the Company; second, to the Holders on a pro rata basis based on the total number of Registrable Securities held by the Holders; and third, to any shareholder of the Company (other than a Holder) on a pro rata basis. No such reduction shall (i) reduce the securities being offered by the Company for its own account to be included in the registration and underwriting, or (ii) reduce the amount of securities of the selling Holders included in the registration below twenty-five percent (25%) of the total amount of securities included in such registration, unless such offering is the Initial Offering and such registration does not include shares of any other selling shareholders, in which event any or all of the Registrable Securities of the Holders may be excluded in accordance with the immediately preceding sentence. In no event will shares of any other selling shareholder be included in such registration which would reduce the number of shares which may be included by Holders without the written consent of Holders of not less than sixty-six and two-thirds percent (66 2/3%) of the Registrable Securities proposed to be sold in the offering. If any Holder disapproves of the terms of any such underwriting, such Holder may elect to withdraw therefrom by written notice to the Company and the underwriter, delivered at least ten (10) business days prior to the effective date of the registration statement. Any Registrable Securities excluded or withdrawn from such underwriting shall be excluded and withdrawn from the registration. For any Holder which is a partnership or corporation, the partners, retired partners and shareholders of such Holder, or the estates and family members of any such partners and retired partners and any trusts for the benefit of any of the foregoing person shall be deemed to be a single “Holder,” and any pro rata reduction with respect to such “Holder” shall be based upon the aggregate amount of shares carrying registration rights owned by all entities and individuals included in such “Holder,” as defined in this sentence.

(b) **Right to Terminate Registration**. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 2.3 prior to the effectiveness of such registration whether or not any Holder has elected to include securities in such registration. The Registration Expenses of such withdrawn registration shall be borne by the Company in accordance with Section 2.5 hereof.

2.4 Form S-3 or Form F-3 Registration

In case the Company shall receive from any Holder or Holders of Registrable Securities a written request or requests that the Company effect a registration on Form S-3 or Form F-3 (or any successor form) or any similar short-form registration statement and any related qualification or compliance with respect to all or a part of the Registrable Securities owned by such Holder or Holders, the Company will:

(a) promptly give written notice of the proposed registration, and any related qualification or compliance, to all other Holders of Registrable Securities; and

(b) as soon as practicable, effect such registration and all such qualifications and compliances as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such Holder's or Holders' Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any other Holder or Holders joining in such request as are specified in a written request given within fifteen (15) days after receipt of such written notice from the Company; provided, however, that the Company shall not be obligated to effect any such registration, qualification or compliance pursuant to this Section 2.4:

(i) if either Form S-3 or Form F-3 is not available for such offering by the Holders, or

(ii) if the Holders, together with the holders of any other securities of the Company entitled to inclusion in such registration, propose to sell Registrable Securities and such other securities (if any) at an aggregate price to the public of less than five hundred thousand Canadian dollars ($500,000 Cdn.), or

(iii) during the period starting with the date of filing of, and ending on the date one hundred eighty (180) days following the effective date of, the registration statement pertaining to a public offering, other than pursuant to a Special Registration Statement; provided that the Company makes reasonable good faith efforts to cause such registration to be effective; or

(iv) if within thirty (30) days of receipt of a written request from any Holder or Holders pursuant to this Section 2.4, the Company gives notice to such Holder or Holders of the Company's intention to make a public offering within ninety (90) days, other than pursuant to a Special Registration Statement, or

(v) if the Company shall furnish to the Holders a certificate signed by the Chairman of the Board of Directors of the Company stating that in the good faith judgment of the Board of Directors of the Company, it would be seriously detrimental to the Company and its shareholders for such Form S-3 or Form F-3 registration to be effected at such time, in which event the Company shall have the right to defer the filing of the Form S-3 or Form F-3 registration statement for a period of not more than ninety (90) days after receipt of the request of the Holder or Holders under this Section 2.4 provided, that such right to delay a request shall be exercised by the Company not more than once in any twelve (12) month period, or

(vi) if the Company has already effected two (2) registrations within the preceding twelve (12) month period on Form S-3 or Form F-3 for the Holders pursuant to this Section 2.4, or

(vii) in any particular jurisdiction in which the Company would be required to qualify to do business or to execute a general consent to service of process in effecting such registration, qualification or compliance.

(c) Subject to the foregoing, the Company shall file a Form S-3 or Form F-3 registration statement covering the Registrable Securities and other securities so requested to be registered as soon as practicable after receipt of the request or requests of the Holders. Registrations effected pursuant to this Section 2.4 shall not be counted as demands for registration or registrations effected pursuant to Sections 2.2 or 2.3, respectively.

2.5 Expenses of Registration

Except as specifically provided herein, all Registration Expenses incurred in connection with any registration, qualification or compliance pursuant to Section 2.2 or any registration under Section 2.3 or Section 2.4 herein shall be borne by the Company. All Selling Expenses incurred in connection with any registrations hereunder, shall be borne by the holders of the securities so registered pro rata on the basis of the number of shares so registered. The Company shall not, however, be required to pay for expenses of any registration proceeding begun pursuant to Section 2.2 or 2.4, the request of which has been subsequently withdrawn by the Initiating Holders unless (a) the withdrawal is based upon material adverse information concerning the Company of which the Initiating Holders were not aware at the time of such request or (b) the Holders of a majority of Registrable Securities agree to forfeit their right to one requested registration pursuant to Section 2.2 or 2.4, as applicable, in which event such right shall be forfeited by all Holders. If the Holders are required to pay the Registration Expenses, such expenses shall be borne by the holders of securities (including Registrable Securities) requesting such registration in proportion to the number of shares for which registration was requested. If the Company is required to pay the Registration Expenses of a withdrawn offering pursuant to clause (a) above, then the Holders shall not forfeit their rights pursuant to Section 2.2 or Section 2.4 to a demand registration.

2.6 Obligations of the Company

Whenever required to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) Prepare and file with the SEC a registration statement with respect to such Registrable Securities and use all reasonable efforts to cause such registration statement to become effective, and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for up to ninety days or, if earlier, until the Holder or Holders have completed the distribution related thereto.

(b) Prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement for the period set forth in paragraph (a) above.

(c) Furnish to the Holders such number of copies of a prospectus, including a preliminary prospectus, in conformity with the requirements of the Securities Act, and such other documents as they may reasonably request in order to facilitate the disposition of Registrable Securities owned by them.

(d) Use its reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or Blue Sky laws of such jurisdictions as shall be reasonably requested by the Holders; provided that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or to file a general consent to service of process in any such states or jurisdictions.

(e) In the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter(s) of such offering. Each Holder participating in such underwriting shall also enter into and perform its obligations under such an agreement.

(f) Notify each Holder of Registrable Securities covered by such registration statement at any time when a prospectus relating thereto is required to be delivered under the Securities Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing. The Company will use reasonable efforts to amend or supplement such prospectus in order to cause such prospectus not to include any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing. Each Holder of Registrable Securities agrees that upon receipt of any notice from the Company of the happening of any event of the kind described in this paragraph (f) of this Section 2.6, such Holder will discontinue such Holder's disposition of Registrable Securities pursuant to the registration statement covering such Registrable Securities until such Holder's receipt of the copies of the supplemented or amended prospectus contemplated by paragraph (f) of this Section 2.6 and, if so directed by the Company, will deliver to the Company (at the Company's expense) all copies, other than permanent file copies, then in such Holder's possession of the prospectus covering such Registrable Securities that was in effect at the time of receipt of such notice.

(g) Use its reasonable efforts to furnish, on the date that such Registrable Securities are delivered to the underwriters for sale, if such securities are being sold through underwriters, (i) an opinion, dated as of such date, of the counsel representing the Company for the purposes of such registration, in form and substance as is customarily given to underwriters in an underwritten public offering, addressed to the underwriters, if any, and (ii) a letter dated as of such date, from the independent certified public accountants of the Company, in form and substance as is customarily given by independent certified public accountants to underwriters in an underwritten public offering addressed to the underwriters.

2.7 Termination of Registration Rights

All registration rights granted under this Article 2 shall terminate and be of no further force and effect four (4) years after the date of the Company's Initial Offering. In addition, a Holder's registration rights shall expire if (a) the Company has completed its Initial Offering and is subject to the provisions of the Exchange Act, (b) such Holder (together with its affiliates, partners and former partners) holds less than 1% of the Company's outstanding Common Shares (treating all preferred shares of the Company on an as converted basis) and (c) all Registrable Securities held by and issuable to such Holder (and its affiliates, partners, former partners, members and former members) may be sold under Rule 144 during any ninety (90) day period.

2.8 Delay of Registration; Furnishing Information

(a) No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any such registration as the result of any controversy that might arise with respect to the interpretation or implementation of this Article 2.

(b) It shall be a condition precedent to the obligations of the Company to take any action pursuant to Section 2.2, 2.3 or 2.4 that the selling Holders shall furnish to the Company such information regarding themselves, the Registrable Securities held by them and the intended method of disposition of such securities as shall be required to effect the registration of their Registrable Securities.

(c) The Company shall have no obligation with respect to any registration requested pursuant to Section 2.2 or Section 2.4 if, due to the operation of subsection 2.2(b), the number of shares or the anticipated aggregate offering price of the Registrable Securities to be included in the registration does not equal or exceed the number of shares or the anticipated aggregate offering price required to originally trigger the Company's obligation to initiate such registration as specified in Section 2.2 or Section 2.4, whichever is applicable.

2.9 Indemnification

In the event any Registrable Securities are included in a registration statement under Sections 2.2, 2.3 or 2.4:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each Holder, the partners, officers and directors of each Holder, any underwriter (as defined in the Securities Act) for such Holder and each person, if any, who controls such Holder or underwriter within the meaning of the Securities Act or the Exchange Act, against any losses, claims, damages, or liabilities (joint or several) to which they may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon any of the following statements, omissions or violations (collectively a "Violation") by the Company: (i) any untrue statement or alleged untrue statement of a material fact contained in such registration statement, including any preliminary prospectus or final prospectus contained therein or any amendments or supplements thereto, (ii) the omission or alleged omission to state therein a material fact required to be stated therein, or necessary to make the statements therein not misleading, or (iii) any violation or alleged violation by the Company of the Securities Act, the Exchange Act, any state securities law or any rule or regulation promulgated under the Securities Act, the Exchange Act or any state securities law in connection with the offering covered by such registration statement; and the Company will pay as incurred to each such Holder, partner, officer, director, underwriter or controlling person for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action; provided however, that the indemnity agreement contained in this Section 2.9(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Company, which consent shall not be unreasonably withheld, nor shall the Company be liable in any such case for any such loss, claim, damage, liability or action to the

extent that it arises out of or is based upon a Violation which occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by such Holder, partner, officer, director, underwriter or controlling person of such Holder.

(b) To the extent permitted by law, each Holder will, if Registrable Securities held by such Holder are included in the securities as to which such registration qualifications or compliance is being effected, indemnify and hold harmless the Company, each of its directors, its officers and each person, if any, who controls the Company within the meaning of the Securities Act, any underwriter and any other Holder selling securities under such registration statement or any of such other Holder's partners, directors or officers or any person who controls such Holder, against any losses, claims, damages or liabilities (joint or several) to which the Company or any such director, officer, controlling person, underwriter or other such Holder, or partner, director, officer or controlling person of such other Holder may become subject under the Securities Act, the Exchange Act or other federal or state law, insofar as such losses, claims, damages or liabilities (or actions in respect thereto) arise out of or are based upon any Violation, in each case to the extent (and only to the extent) that such Violation occurs in reliance upon and in conformity with written information furnished by such Holder under an instrument duly executed by such Holder and stated to be specifically for use in connection with such registration; and each such Holder will pay as incurred any legal or other expenses reasonably incurred by the Company or any such director, officer, controlling person, underwriter or other Holder, or partner, officer, director or controlling person of such other Holder in connection with investigating or defending any such loss, claim, damage, liability or action if it is judicially determined that there was such a violation; provided, however, that the indemnity agreement contained in this Section 2.9(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Holder, which consent shall not be unreasonably withheld; provided further, that in no event shall any indemnity under this Section 2.9 exceed the net proceeds from the offering received by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 2.9 of notice of the commencement of any action (including any governmental action), such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 2.9, deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in, and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party shall have the right to retain its own counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action, if materially prejudicial to its ability to defend such action, shall relieve such indemnifying party of any liability to the indemnified party under this Section 2.9, but the omission so to deliver written notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 2.9.

(d) If the indemnification provided for in this Section 2.9 is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any losses, claims, damages or liabilities referred to herein, the indemnifying party, in lieu of indemnifying such indemnified party thereunder, shall to the extent permitted by applicable law contribute to the amount paid or payable by such indemnified party as a result of such loss, claim, damage or liability in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and of the indemnified party on the other in connection with the Violation(s) that resulted in such loss, claim, damage or liability, as well as any other relevant equitable considerations. The relative fault of the indemnifying party and of the indemnified party shall be determined by a court of law by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission; provided, that in no event shall any contribution by a Holder hereunder exceed the proceeds from the offering received by such Holder.

(e) The obligations of the Company and Holders under this Section 2.9 shall survive completion of any offering of Registrable Securities in a registration statement and the termination of this agreement. No Indemnifying Party, in the defense of any such claim or litigation, shall, except with the consent of each Indemnified Party, consent to entry of any judgment or enter into any settlement which does not include as an unconditional term thereof the giving by the claimant or plaintiff to such Indemnified Party of a release from all liability in respect to such claim or litigation.

2.10 Assignment of Registration Rights

The rights to cause the Company to register Registrable Securities pursuant to this Article 2 may be assigned by a Holder to a transferee or assignee of Registrable Securities which (a) is a subsidiary, parent, affiliate, general partner, limited partner, retired partner, member or retired member of a Holder, (b) is a Holder's family member or trust for the benefit of an individual Holder, (c) acquires at least one hundred thousand (100,000) shares of Registrable Securities (as adjusted for any subdivision or consolidation of shares) or (d) is (I) a limited partnership of which the general partner is under common control with those persons who controlled the Holder or its manager or general partner, as the case may be, as of the date of the transfer, (II) a corporation or other person whose senior officers are, or which is managed by a corporate manager whose senior officers are, common officers of the Holder or its manager or general partner, as the case may be, as of the date of the transfer; and (III) a person who is a bona fide investor (including the general partner or fund manager, as the case maybe, and any of its associates or affiliates) in the Holder who is entitled to participate in a distribution of the assets of the Holder upon winding up, liquidation or dissolution where the Shares are distributed to them on such occurrence, provided, however, (i) the transferor shall, within ten (10) days after such transfer, furnish to the Company written notice of the name and address of such transferee or assignee and the securities with respect to which such registration rights are being assigned and (ii) such transferee shall agree in writing to be subject to all restrictions set forth in this Agreement.

2.11 Amendment of Registration Rights

Any provision of this Article 2 may be amended and the observance thereof may be waived (either generally or in a particular instance and either retroactively or prospectively), only with the written consent of the Company and the consent of both the Holders of at least a majority of the Registrable Securities then outstanding and the consent of Investors holding at least 75% of the Registrable Securities then held by the Investors. Any amendment or waiver effected in accordance with this Section 2.11 shall be binding upon each Holder and the Company. By acceptance of any benefits under this Article 2, Holders of Registrable Securities hereby agree to be bound by the provisions hereunder.

2.12 Limitation on Subsequent Registration Rights

Other than as provided in Section 10.11, after the date of this Agreement, the Company shall not, without the prior written consent of the Holders of at least sixty-six and two-thirds percent (66 2/3%) of the Registrable Securities then outstanding, enter into any agreement with any holder or prospective holder of any securities of the Company that would grant such holder registration rights pari passu or senior to those granted to the Holders hereunder. Notwithstanding the foregoing or any other provision of this Agreement, the holders of Series A preferred shares of the Company who have become parties to and bound by the First Investor Rights Agreement except for the rights and obligations under Article 3 and Article 4 of the First Investor Rights Agreement shall be considered Holders for all purposes under Article 2 of this Agreement.

2.13 “Market Stand-OM Agreement; Agreement to Furnish Information

Each Holder hereby agrees that such Holder shall not sell, transfer, make any short sale of, grant any option for the purchase of, or enter into any hedging or similar transaction with the same economic effect as a sale, any Common Shares (or other securities) of the Company held by such Holder (other than those included in the registration) for a period specified by the representative of the underwriters of Common Shares (or other securities) of the Company not to exceed one hundred eighty (180) days following the effective date of a registration statement of the Company filed under the Securities Act or a prospectus filed in Canada as contemplated in Section 2.15; provided that:

(a) such agreement shall apply only to the Company’s Initial Offering or an offering contemplated in Section 2.15; and

(b) all officers and directors of the Company enter into similar agreements.

Each Holder agrees to execute and deliver such other agreements as may be reasonably requested by the Company or the underwriter which are consistent with the foregoing or which are necessary to give further effect thereto. In addition, if requested by the Company or the representative of the underwriters of Common Shares (or other securities) of the Company, each Holder shall provide, within ten (10) days of such request, such information as may be required by the Company or, such representative in connection with the completion of any public offering of the Company’s securities pursuant to a registration statement filed under the Securities Act. The obligations described in this Section 2.13 shall not apply to a registration relating solely to employee benefit plans on Form S-1 or Form S-8 or similar forms that may be promulgated in the future, or a registration relating solely to a Commission Rule 145 transaction on Form S-4 or similar forms that may be promulgated in the future. The Company may impose stop-transfer instructions with respect to the shares of Common Shares (or other securities) subject to the foregoing restriction until the end of said one hundred eighty (180) day period. Each Holder agrees that any transferee of any shares of Registrable Securities shall be bound by this Section 2.13.

2.14 Rule 144 Reporting

With a view to making available to the Holders the benefits of certain rules and regulations of the SEC which may permit the sale of the Registrable Securities to the public without registration, the Company agrees to use its best efforts to:

(a) Make and keep public information available, as those terms are understood and defined in SEC Rule 144 or any similar or analogous rule promulgated under the Securities Act, at all times after the effective date of the first registration filed by the Company for an offering of its securities to the general public;

(b) File with the SEC, in a timely manner, all reports and other documents required of the Company under the Exchange Act; and

(c) So long as a Holder owns any Registrable Securities, furnish to such Holder forthwith upon request: a written statement by the Company as to its compliance with the reporting requirements of said Rule 144 of the Securities Act, and of the Exchange Act (at any time after it has become subject to such reporting requirements); a copy of the most recent annual or quarterly report of the Company; and such other reports and documents as a Holder may reasonably request in availing itself of any rule or regulation of the SEC allowing it to sell any such securities without registration.

2.15 Filing of Canadian Prospectus

If the Company at any time files a prospectus in any province of Canada, the Company shall file such prospectus, and use all reasonable efforts to obtain a receipt therefor, in Ontario and any other province in which Series E Shares have been issued, and such prospectus shall qualify the issuance of Common Shares issuable upon the conversion of the Series E Shares such that the underlying Common Shares resulting from the conversion of the Series E Shares will be freely tradable under Canadian securities laws, to the maximum extent permitted by applicable law.

ARTICLE 3
COVENANTS OF THE COMPANY

3.1 Basic Financial Information and Reporting

(a) The Company will maintain true books and records of account in which full and correct entries will be made of all its business transactions pursuant to a system of accounting established and administered in accordance with Canadian generally accepted accounting principles consistently applied, and will set aside on its books all such proper accruals and reserves as shall be required under Canadian generally accepted accounting principles consistently applied.

(b) As soon as practicable after the end of each fiscal year of the Company, and in any event within one hundred twenty (120) days thereafter, the Company will furnish each Investor a balance sheet of the Company, as at the end of such fiscal year, and a statement of income and a statement of cash flows of the Company, for such year, all

prepared in accordance with Canadian generally accepted accounting principles consistently applied and setting forth in each case in comparative form the figures for the previous fiscal year, all in reasonable detail. Such audited financial statements shall be accompanied by a report and opinion thereon by independent public accountants of national standing selected by the Company's Board of Directors.

(c) The Company will furnish each Investor, as soon as practicable after the end of the first, second and third quarterly accounting periods in each fiscal year of the Company, and in any event within forty-five (45) days thereafter, a balance sheet of the Company as of the end of each such quarterly period, and a statement of income and a statement of cash flows of the Company for such period and for the current fiscal year to date, prepared in accordance with Canadian generally accepted accounting principles, with the exception that no notes need be attached to such statements and year-end audit adjustments need not have been made.

(d) So long as a Series B Investor listed on Exhibit C hereto owns not less than 2% of the total outstanding Common Shares (calculated on a fully diluted basis) or securities convertible or exchangeable into not less than 2% of the outstanding Common Shares (calculated on a fully diluted basis), each such Series 13 Investor shall (subject to the following) be entitled to have an observer attend all board meetings of the Company and receive copies of all materials sent to directors of the Company in connection with a board meeting of the Company; provided however, that the Company shall be under no obligation to deliver any materials hereunder where the board of directors determines, acting reasonably, that a matter should be considered at an "in camera" session of the board of directors without any observers present. In the event that Ventures West 7 Limited Partnership ceases to own at least 2% of the total outstanding Common Shares (calculated on a fully diluted basis) or securities convertible or exchangeable into at least 2% of the outstanding Common Shares (calculated on a fully diluted basis), it will cease to have an observer attending all board meetings of the Company but as long as it owns not less than 1% of the total outstanding Common Shares (calculated on a fully diluted basis) or securities convertible or exchangeable into at least 1% of the outstanding Common Shares (calculated on a fully diluted basis), it will continue to have the right to receive copies of all materials sent to directors of the Company in connection with a board meeting of the Company; provided however, that the Company shall be under no obligation to deliver any materials hereunder where the board of directors determines, acting reasonably, that a matter should be considered at an "in camera" session of the board of directors without any observers present.

3.2 Confidentiality of Records

Each Investor agrees to use, and to use its best efforts to insure that its authorized representatives use, the same degree of care as such Investor uses to protect its own confidential information to keep confidential any information furnished to it which the Company identifies as being confidential or proprietary (so long as such information is not in the public domain), except that such Investor may disclose such proprietary or confidential information to any partner, subsidiary or parent of such Investor for the purpose of evaluating its investment in the Company as long as such partner, subsidiary or parent is advised of the confidentiality provisions of this Section 3.2.

3.3 Reservation of Common Shares

The Company will at all times reserve and keep available, solely for issuance and delivery upon the conversion of the Series B Shares or Series E Shares, as the case may be, all Common Shares issuable from time to time upon such conversion.

3.4 Proprietary Information and Inventions Agreement

The Company shall require all new employees and consultants from the date of this Agreement to deliver and execute an agreement relating to the Company's proprietary information in the form currently executed by all employees of the Company (a copy of which has been provided to the Investors as part of their due diligence).

3.5 Directors' Insurance

The Company shall, at all times when any Investor shall have a representative on the Company's board of directors, an insurance policy covering acts and omissions of directors having a per claim limit of not less than $2 million (Cdn).

3.6 Termination of Covenants

All covenants of the Company contained in Article 3 of this Agreement shall expire and terminate as to each Investor upon the earlier of (i) the effective date of the registration statement pertaining to the Initial Offering, which results in the preferred shares of the Company being converted into Common Shares, or (ii) upon (a) the sale, lease or other disposition of all or substantially all of the assets of the Company or (b) an acquisition of the Company by another corporation or entity by consolidation, merger or other reorganization in which the holders of the Company's outstanding voting shares immediately prior to such transaction own, immediately after such transaction, securities representing less than fifty percent (50%) of the voting power of the corporation or other entity surviving such transaction, provided that this Section 3.6(ii)(b) shall not apply to a merger effected exclusively for the purpose of changing the domicile of the Company (a "Change in Control").

ARTICLE 4
RIGHTS OF FIRST REFUSAL

4.1 Subsequent Offerings

Each Investor, for so long as such Investor owns not less than 100,000 Shares (a "Major Investor"), shall have a right of first refusal to purchase its pro rata share of all Equity Securities, as defined below, that the Company may, from time to time, propose to sell and issue after the date of this Agreement, other than the issuance of the Series E Shares pursuant to the Investor Group Purchase Agreement, the issuance of an aggregate of 379,594 Series E Shares to Chancellor V-A L.P., Chancellor V, .L.P., Citiventure 2000, L.P. and Alpha Technologies Limited, the issuance of the Series E Shares to TRI pursuant to the TRI Purchase Agreement, the issuance of the Series E Shares to Takeda pursuant to the Takeda Purchase Agreement, the issuance of the Series E Shares to Roche pursuant to the Roche Purchase Agreement and the issuance of the Equity Securities excluded by Section 4.6 hereof. Each Major Investor's pro rata share is equal to the ratio of (a) the number of shares of the Company's Common Shares (including all shares of Common Shares issued or issuable upon conversion of the Shares) which such Major Investor is deemed to be a holder immediately prior to the issuance of such Equity Securities to (b) the total number of shares of the Company's

outstanding Common Shares (including all shares of Common Shares issued or issuable upon conversion of the Shares or upon the exercise of any outstanding warrants or options) immediately prior to the issuance of the Equity Securities. The term “Equity Securities” shall mean (i) any Common Shares, Series B Shares, Series E Shares or other security of the Company, (ii) any security convertible, with or without consideration, into any Common Shares, Series B Shares, Series E Shares or other security (including any option to purchase such a convertible security), (iii) any security carrying any warrant or right to subscribe to or purchase any Common Shares, Series B Shares, Series E Shares or other security or (iv) any such warrant or right.

4.2 Exercise of Rights

If the Company proposes to issue any Equity Securities, it shall give each Major Investor written notice of its intention, describing the Equity Securities, the price and the terms and conditions upon which the Company proposes to issue the same. Each Major Investor shall have ten business days from the giving of such notice to agree to purchase its pro rata share of the Equity Securities for the price and upon the terms and conditions specified in the notice by giving written notice to the Company and stating therein the quantity of Equity Securities to be purchased. Notwithstanding the foregoing, the Company shall not be required to offer or sell such Equity Securities to any Major Investor who would cause the Company to be in violation of applicable Canadian, provincial or U.S. federal securities laws by virtue of such offer or sale.

4.3 Issuance of Equity Securities to Other Persons

If not all of the Major Investors elect to purchase their pro rata share of the Equity Securities, then the Company shall promptly notify in writing the Major Investors who do so elect and shall offer such Major Investors the right to acquire such unsubscribed shares. The Major Investors shall have five (5) days after receipt of such notice to notify the Company of its election to purchase all or a portion thereof of the unsubscribed shares. If the Major Investors fail to exercise in full the rights of first refusal, the Company shall have ninety (90) days thereafter to sell the Equity Securities in respect of which the Major Investor’s rights were not exercised, at a price and upon general terms and conditions materially no more favorable to the purchasers thereof than specified in the Company’s notice to the Major Investors pursuant to Section 4.2 hereof. If the Company has not sold such Equity Securities within ninety (90) days of the notice provided pursuant to Section 4.2, the Company shall not thereafter issue or sell any Equity Securities, without first offering such securities to the Major Investors in the manner provided above.

4.4 Termination and Waiver of Rights of First Refusal

The rights of first refusal established by this Article 4 shall not apply to, and shall terminate upon the earlier of:

(a) effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is conducted at a minimum price of $4.42 (U.S.) per Common Share (subject to adjustment for any share consolidation or subdivision or the grant of any stock dividends subsequent to the date hereof) and for minimum gross proceeds (before underwriting discounts, commission, expenses of issue and fees) of not less than $40 million (U.S.) and the Common Shares are listed or quoted upon a recognized senior stock exchange or public securities quotation system (including, without limitation, the Toronto Stock Exchange or the NASDAQ National Market); or

(b) a Change in Control.

The rights of first refusal established by this Article 4 may be amended, or any provision waived with the written consent of Major Investors holding two thirds in interest of the Registrable Securities held by all Major Investors and in the case of an amendment, with the written consent of the Company, or as permitted by Section 10.6. Notwithstanding any other provision of this Agreement, the written consent of the Company and Series B Investors who are Major Investors holding two thirds in interest of the Registrable Securities held by Series B Investors who are Major Investors is required to effect any amendment to subsection 4.4(a) to the extent applicable to the termination of the rights of first refusal with respect to the rights of Series B Investors and the written consent of the Company and Series E Investors who are Major Investors holding two thirds in interest of the Registrable Securities held by Series E Investors who are Major Investors is required to effect an amendment to subsection 4.4(a) to the extent applicable to the termination of the rights of first refusal with respect to the rights of Series E Investors.

4.5 Transfer of Rights of First Refusal

The rights of first refusal of each Major Investor under this Article 4 may be transferred to the same parties, subject to the same restrictions as any transfer of registration rights pursuant to Section 2.10.

4.6 Excluded Securities

The rights of first refusal established by this Article 4 shall have no application to any of the following Equity Securities:

(a) 6,829,477 Common Shares (and/or options, warrants or other Common Shares purchase rights issued pursuant to such options, warrants or other rights) to employees, officers or directors of, or consultants or advisors to the Company or any subsidiary, pursuant to stock purchase or stock option plans or other arrangements ("Employment Securities") that are approved by the Board of Directors, plus such additional number of Employment Securities, the issuance of which are approved by the Board of Directors and the shareholders of the Company;

(b) Equity Securities issued pursuant to any rights or agreements outstanding as of the date of this Agreement (as listed in the Schedule of Exceptions to the Purchase Agreement dated March 26, 2001 (the "Purchase Agreement"));

(c) Equity Securities issued pursuant to any such rights or agreements granted after the date of this Agreement; provided that the rights of first refusal established by this Article 4 applied (or was waived) with respect to the initial sale or grant by the Company of such rights or agreements;

(d) any Equity Securities issued for consideration other than cash pursuant to a merger, consolidation, acquisition or similar business combination approved by the Board of Directors;

(e) Equity Securities issued in connection with any subdivision of shares, stock dividend or recapitalization by the Company;

(f) Equity Securities issued upon conversion of the Series A, Series B, Series C, Series D and Series E preferred shares;

(g) up to 1,000,000 Equity Securities issued pursuant to any equipment leasing or loan arrangement, or debt financing from a bank or similar financial or lending institution approved by the Board of Directors provided that the per share value attributed to such Equity Securities is greater than or equal to $2.9469 (U.S.);

(h) any Equity Securities that are issued by the Company pursuant to a registration statement filed under the Securities Act or a prospectus filed in Canada as contemplated in Section 2.15; and

(i) up to 250,000 Equity Securities issued pursuant to agreements approved by the Board of Directors whereby the Company issues Equity Securities in lieu of paying licensing or similar fees in cash provided that the per share value attributed to such Equity Securities is greater than or equal to $2.9469 (U.S.).

4.7 Canadian — U.S. Dollar Exchange Rate

For the purpose of converting Canadian dollar amounts to U.S. dollars, or vice versa, on the issuance of securities contemplated in this Article 4, the exchange rate shall be calculated based on the Bank of Canada noon spot rate for U.S. dollars against Canadian dollars on the date that such securities are issued.

ARTICLE 5
NOVARTIS RIGHTS AND OBLIGATIONS

5.1 Agreement to Vote

Novartis agrees with the Company and the other Investors that it will vote the Series E Shares held by it, whether at law, pursuant to the share rights attached to the Series E Shares (the "Series E Share Rights") or pursuant to any agreement to which the other Series E Investors are a party, and it will grant all consents, waivers and approvals, make all elections and take any action required by such Series E Share Rights or any such agreement (including this Agreement), in the same proportions as the votes cast (or waivers, consents, approvals, elections or actions taken) by the other Series E Investors.

5.2 Exception

Notwithstanding Section 5.1, Novartis agrees with the Company and the other Investors that it shall not be required to vote its Series E Shares in accordance with Section 5.1 with respect to matters to be voted on by the holders of Common Shares where the holders of the Series E Shares are entitled to vote their Series E Shares as if they were Common Shares, whether at law or otherwise.

5.3 Adjustment to Conversion Rights

Novartis agrees with the Company and the other Investors that all references to US$6.85 in Section 2.5(b)(iii) of the Series E Share Rights shall be deemed to be US$8.25 for the purpose of determining adjustments to conversion rights of the Series E Shares acquired by Novartis pursuant to the Novartis Purchase Agreement.

ARTICLE 6
TRI RIGHTS AND OBLIGATIONS

6.1 Agreement to Vote

TM agrees with the Company and the other Investors that it will vote the Series E Shares held by it, whether at law, pursuant to the Series E Share Rights or pursuant to any agreement to which the other Series E Investors are a party, and it will grant all consents, waivers and approvals, make all elections and take any action required by such Series E Share Rights or any such agreement (including this Agreement), in the same proportions as the votes cast (or waivers, consents, approvals, elections or actions taken) by the other Series E Investors.

6.2 Exception

Notwithstanding Section 6.1, TRI agrees with the Company and the other Investors that it shall not be required to vote its Series E Shares in accordance with Section 6.1 with respect to matters to be voted on by the holders of Common Shares where the holders of the Series E Shares are entitled to vote their Series E Shares as if they were Common Shares, whether at law or otherwise.

6.3 Adjustment to Conversion Rights

Notwithstanding section 2.5(d) of the share rights attached to the Series E Shares under the Articles of the Company, TRI will convert all Series E Shares held by it into Common. Shares of the Company immediately prior to completion of any Change of Control Transaction or an Asset Transfer, as such terms are defined in the Articles of the Company.

ARTICLE 7
OTHER NEW INVESTORS RIGHTS AND OBLIGATIONS

7.1 Takeda Rights and Obligations

(a) Agreement to Vote

Takeda agrees with the Company and the other Investors that it will vote the Series E Shares held by it, whether at law, pursuant to the Series E Share Rights or pursuant to any agreement to which the other Series E Investors are a party, and it will grant all consents, waivers and approvals, make all elections and take any action required by such Series E Share Rights or any such agreement (including this Agreement), in the same proportions as the votes cast (or waivers, consents, approvals, elections or actions taken) by the other Series E Investors.

(b) Exception

Notwithstanding subsection (a) above, Takeda agrees with the Company and the other Investors that it shall not be required to vote its Series E Shares in accordance with subsection (a) with respect to matters to be voted on by the holders of Common Shares where the holders of the Series E Shares are entitled to vote their Series E Shares as if they were Common Shares, whether at law or otherwise.

(c) Adjustment to Conversion Rights

Notwithstanding section 2.5(d) of the share rights attached to the Series E Shares under the Articles of the Company, Takeda will convert all Series E Shares held by it into Common Shares of the Company immediately prior to completion of any Change of Control Transaction or an Asset Transfer, as such terms are defined in the Articles of the Company.

7.2 Roche Rights and Obligations

(a) Agreement to Vote

Roche agrees with the Company and the other Investors that it will vote the Series E Shares held by it, whether at law, pursuant to the Series E Share Rights or pursuant to any agreement to which the other Series E Investors are a party, and it will grant all consents, waivers and approvals, make all elections and take any action required by such Series E Share Rights or any such agreement (including this Agreement), in the same proportions as the votes cast (or waivers, consents, approvals, elections or actions taken) by the other Series E Investors.

(b) Exception

Notwithstanding subsection (a) above, Roche agrees with the Company and the other Investors that it shall not be required to vote its Series E Shares in accordance with subsection (a) above with respect to matters to be voted on by the holders of Common Shares where the holders of the Series E Shares are entitled to vote their Series E Shares as if they were Common Shares, whether at law or otherwise.

(c) Adjustment to Conversion Rights

Notwithstanding section 2.5(d) of the share rights attached to the Series E Shares under the Articles of the Company, Roche will convert all Series E Shares held by it into Common Shares of the Company immediately prior to completion of any Change of Control Transaction or an Asset Transfer, as such terms are defined in the Articles of the Company, and shall receive the appropriate consideration for such Common Shares; provided, however, that (i) if such Change of Control Transaction or Asset Transfer occurs more than twenty-four (24) months following the Closing of the Roche Purchase Agreement, this provision shall not apply and Roche shall have no obligation to convert its Series E Shares into Common Shares and (ii) if the Company should sell Series E Shares to a Strategic Investor (a Strategic Investor shall mean an investor which is a pharmaceutical or biotechnology company making an investment in connection with a separate licensing agreement with the Company) and the Strategic Investor is not obligated to convert its Series E Shares into Common Shares upon any Change of Control Transaction or an Asset Transfer, this Agreement shall be amended to delete this Section 7.2 (c).

ARTICLE 8
CONFIRMATION OF ADJUSTMENT TO CONVERSION RIGHTS ATTACHED TO SERIES E SHARE RIGHTS

8.1 Confirmation in respect of Adjustment to Conversion Rights

Subject to Section 5.3 above, each of the Series E Investors agrees and confirms with each other and the Company that Section 2.5(b)(iii) of the Articles of the Company (which sets out the provision relating to the “Adjustment to Conversion Right” applicable to Series E Shares) as set out in an amendment to Articles approved by the shareholders of the Company at a meeting of the shareholders of the Company on March 31, 2006, shall be valid and binding on each of them if and when such provision becomes effective as part of the Articles of the Company and each of the Series E Investors shall take all reasonable actions to support and give effect to such provision.

ARTICLE 9
CONVERSION OF SERIES B PREFERRED SHARES AND SERIES E PREFERRED SHARES

9.1 Conversion of Series B preferred shares and Series E preferred shares

The parties hereby agree that the Company will be able to cause the Series B preferred shares of the Company and Series E preferred shares of the Company to be converted into Common Shares with the closing of a firmly underwritten initial public offering of the Company if such offering is conducted at a minimum price of $4.42 (U.S.) per Common Share and the minimum gross proceeds to the Company are not less than $40 (U.S.) million and the Common Shares are listed or quoted upon a recognized senior stock exchange or public securities quotation system (including, without limitation, the Toronto Stock Exchange or the NASDAQ National Market).

ARTICLE 10ARTICLE 10
MISCELLANEOUS

10.1 Governing Law

This Agreement shall be governed by and construed under the laws of the Province of British Columbia.

10.2 Survival

The representations, warranties, covenants, and agreements made herein shall survive any investigation made by any Investor or Holder and the closing of the transactions contemplated hereby. All statements as to factual matters contained in any certificate or other instrument delivered by or on behalf of the Company pursuant hereto in connection with the transactions contemplated hereby shall be deemed to be representations and warranties by the Company hereunder solely as of the date of such certificate or instrument.

10.3 Successors and Assigns

Except as otherwise expressly provided herein, the provisions hereof shall enure to the benefit of, and be binding upon, the successors, assigns, heirs, executors, and administrators of the parties hereto and shall enure to the benefit of and be enforceable by each person who shall be a holder of Registrable Securities from time to time; provided, however, that prior to the receipt by the Company of adequate written notice of the transfer of any Registrable Securities specifying the full name and address of the transferee, the Company may deem and treat the person listed as the holder of such shares in its records as the absolute owner and holder of such shares for all purposes, including the payment of dividends or any redemption price.

10.4 Entire Agreement

This Agreement, the Exhibits and Schedules hereto and the other documents delivered pursuant thereto constitute the full and entire understanding and agreement between the parties with regard to the subjects hereof and no party shall be liable or bound to any other in any manner by any representations, warranties, covenants and agreements except as specifically set forth herein and therein.

10.5 Severability

In the event one or more of the provisions of this Agreement should, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provisions of this Agreement, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

10.6 Amendment and Waiver

(a) Except as otherwise expressly provided, this Agreement may be amended or modified only upon the written consent of the Company and the consent of both the holders of at least a majority of the Registrable Securities and the consent of Investors holding at least 75% of the Registrable Securities then held by the Investors.

(b) Except as otherwise expressly provided, the obligations of the Company and the rights of the Holders under this Agreement may be waived only with the written consent of the holders of at least a majority of the Registrable Securities.

(c) Notwithstanding the foregoing, this Agreement may be amended with only the written consent of the Company to include additional purchasers of Shares as “Investors”, “Holders” and parties hereto. Any amendment or waiver effected in accordance with clauses (a) and (b) of this Section 10.6 shall be binding upon each Investor, its successors and assigns, and the Company.

(d) For the purposes of determining the number of Holders or Investors entitled to vote or exercise any rights hereunder, the Company shall be entitled to rely solely on the list of record holders of its shares as maintained by or on behalf of the Company.

10.7 Delays or Omissions

It is agreed that no delay or omission to exercise any right, power, or remedy accruing to any Holder, upon any breach, default or noncompliance of the Company under this Agreement shall impair any such right, power, or remedy, nor shall it be construed to be a waiver of any such breach, default or noncompliance, or any acquiescence therein, or of any similar breach, default or noncompliance thereafter occurring. It is further agreed that any waiver, permit, consent or approval of any kind or character on any Holder’s part of any breach, default or noncompliance under the Agreement or any waiver on such Holder’s part of any provisions or conditions of this Agreement must be in writing and shall be effective only to the extent specifically set forth in such writing. All remedies, either under this Agreement, by law, or otherwise afforded to Holders, shall be cumulative and not alternative.

10.8 Notices

All notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by confirmed electronic mail or facsimile if sent during normal business hours of the recipient; if not, then on the next business day, (c) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one (1) business day after deposit with a nationally recognized overnight courier,

specifying next day delivery, with written verification of receipt. All communications shall be sent to the party to be notified at the address as set forth on the signature pages hereof or Exhibits A and B hereto or at such other address as such party may designate by ten (10) days advance written notice to the other parties hereto.

10.9 Aggregation of Stock

All Shares held or acquired by affiliated entities or persons shall be aggregated together for the purpose of determining the availability of any rights under this Agreement.

10.10 Titles and Subtitles

The titles of the sections and subsections of this Agreement are for convenience of reference only and are not to be considered in construing this Agreement.

10.11 Additional Investors

Notwithstanding anything to the contrary contained herein, if the Company shall issue additional Series E Shares pursuant to the Purchase Agreement, any purchaser of such Series E Shares may become a party to this Agreement by executing and delivering an additional counterpart signature page to this Agreement and shall be deemed an “Investor” hereunder.

10.12 Counterparts

This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.

IN WITNESS WHEREOF, the parties hereto have executed this **AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT** as of the date set forth in the first paragraph hereof.

XENON PHARMACEUTICALS INC.

By: /s Simon Pimstone
Simon Pimstone
President and CEO

INTERWEST INVESTORS VII, L.P. by its general partner **INTERWEST MANAGEMENT PARTNERS VII, LLC**

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

INTERWEST INVESTORS VII, L.P. by its general partner **INTERWEST MANAGEMENT PARTNERS VII, LLC**

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

GC & H INVESTMENTS

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

WORKING OPPORTUNITY FUND (EVCC) LTD. by its manager **GROWTH WORKS CAPITAL LTD**

By: /s Vijay Sondhi
Authorized Signatory

ROYAL BANK OF CANADA

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

J.P. MORGAN PARTNERS (BHCA), L.P.

By: **JPMP MASTER FUND MANAGER, L.P.** its general partner
By: **JPMP CAPITAL CORP.,** its general Partners

/s Vijay Sondhi
GEORGE G. MONTGOMERY

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

VENTURES WEST 7. U.S. LIMITED PARTNERSHIP by its manager,
VENTURES WEST 7 MANAGEMENT (INTERNATIONAL) INC.

By: /s Vijay Sondhi
Authorized Signatory

VENTURES WEST 7 LIMITED PARTNERSHIP by its general partner,
VENTURES WEST 7 MANAGEMENT LTD.

By: /s Vijay Sondhi
Authorized Signatory

FIDELITY SELECT PORTFOLIOS: BIOTECHNOLOGY PORTFOLIO

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

FIDELITY CANADIAN GROWN COMPANY FUND

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

FIDELITY CANADIAN ASSET ALLOCATION FUND

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

FIDELITY CANADIAN OPPORTUNITIES FUND (FORMERLY FIDELITY CANADIAN AGGRESSIVE (FUND)

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

NOVO A/S

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

WARNER LAMBERT COMPANY

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

CHANCELLOR V-A L.P

By: IPC Direct Associates V, L.L.C., its general partner
By: INVESCO Private Capital, Inc. its managing member

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

CHANCELLOR V, L.P

By: IPC Direct Associates V, L.L.C., its general partner
By: INVESCO Private Capital, Inc. its managing member

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

CITIVENTURE 2000, L.P.

By: IPC Direct Associates V, L.L.C., its general partner
By: INVESCO Private Capital, Inc., its managing member

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

ALPHA TECHNOLOGIES LIMITED

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

NOVARTIS PHARMA AG

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

LIPOTERX LTD

By: Lipoterx LLP, its general partner

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

MX ASSOCIATES LLP

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

TAKEDA RESEARCH INVESTMENT, INC.

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

TAKEDA PHARMACEUTICAL COMPANY LIMITED

By: /s Vijay Sondhi
Name: Vijay Sondhi
Title: Chief Financial Officer of Xenon Pharmaceuticals Inc.

ROCHE FINANCE LTD

By: _____
Name:
Title:

MX Associates LLP

By: _____ c/s
Name:
Title:

TAKEDA RESEARCH INVESTMENT, INC.

By: _____ c/s
Name:
Title:

TAKEDA PHARMACEUTICAL COMPANY LIMITED

By: _____ c/s
Name:
Title:

ROCHE FINANCE LTD

By: /s Kniertinger Maier
Name: Kniertinger Maier
Title:

Exhibit A

SCHEDULE OF SERIES B INVESTORS

	Series B Investors	**Address**
1.	Interwest Partners VII, L.P.	3000 Sand Hill Road, Building 3, Suite 255 Menlo Park, CA 94052
2.	Interwest Investors VII, L.P.	3000 Sand Hill Road, Building 3, Suite 255 Menlo Park, CA 94052
3.	GC&H Investments	
4.	Working Opportunity Fund (EVCC) Ltd.	Suite 2600, Royal Centre, 1055 West Georgia Street, Vancouver, British Columbia V6E 3R5
5.	Royal Bank of Canada	Suite 1340, 1111 West Georgia Street, Vancouver, British Columbia V6E 4M3
6.	Ventures West 7 Limited Partnership	Suite 280, 1285 West Pender Street, Vancouver, British Columbia V6E 4B1

Exhibit B

SCHEDULE OF SERIES E INVESTORS

	Series E Investors	**Address**
1.	Fidelity Select Portfolios: Biotechnology Portfolio	82 Devonshire Street E20E Boston, MA 02109
2.	Fidelity Canadian Opportunities Fund	82 Devonshire Street E20E Boston, MA 02109
3.	Fidelity Canadian Growth Company Fund	82 Devonshire Street E20E Boston, MA 02109
4.	Fidelity Canadian Asset Allocation Fund	82 Devonshire Street E20E Boston, MA 02109
5.	Chancellor V, L.P.	1166 Avenue of the Americas 27th Floor New York, NY 10036
6.	Chancellor V-A, L.P.	1166 Avenue of the Americas 27th Floor New York, NY 10036
7.	Citiventure 2000, L.P.	1166 Avenue of the Americas 27th Floor New York, NY 10036
8.	Alpha Technologies Limited	c/o UBS International Inc. 633 W. Fifth Street 64th Floor
9.	Working Opportunity Fund (EVCC) Ltd.	Suite 2600, Royal Centre, 1055 West Georgia Street, Vancouver, British Columbia V6E 3R5
10.	InterWest Partners VII, L.P.	3000 Sand Hill Road, Building 3, Suite 255 Menlo Park, CA 94052
11.	InterWest Investors VII, L.P.	3000 Sand Hill Road, Building 3, Suite 255 Menlo Park, CA 94052
12.	JP Morgan Partners (BHCA), L.P.	1 Bush St, 12th Floor San Francisco, California 94104
13.	George G. Montgomery	1 Bush St., 12th Floor San Francisco, California 94104

	Series E Investors	Address
14.	Novo A/S	Krogshoejvej 41, DK-2880 Bagsvaerd, Denmark
15.	Warner Lambert Company	Eastern Point Rd. Groton, CT, 06340
16.	Royal Bank of Canada	Suite 1340, 1111 West Georgia Street Vancouver, British Columbia V6E 4M3
17.	Ventures West 7 Limited Partnership	Suite 280, 1285 West Pender Street, Vancouver, British Columbia V6E 4B1
18.	Ventures West 7 U.S. Limited Partnership	Suite 280, 1285 West Pender Street, Vancouver, British Columbia V6E 4B1
19.	Novartis Pharma AG	Lichtstrasse 35 CH-4002 Basel Switzerland
20.	MX Associates LLP	4620 Wesley Avenue Cincinnati, Ohio 45212
21.	Lipoterx Ltd.	Suite 102 3131 Harvey Avenue Cincinnati, Ohio 45229
22.	Takeda Research Investment, Inc.	Suite 300 435 Tasso Street Palo Alto, California 94301
23.	*(a) Takeda Pharmaceutical Company Limited	1-1, Doshomachi 4-chome, Chuo-ku Osaka 540-8645 Japan
	*(b) Roche Finance Ltd.	Grenzacherstrasse 124 CH-4070 Basel Switzerland

Exhibit C

SCHEDULE OF CANADIAN SERIES B INVESTORS

Series B Investors	**Address**
1. Working Opportunity Fund (EVCC) Ltd	Suite 2600, Royal Centre, 1055 West Georgia Street, Vancouver, British Columbia V6E 3R5
2. Royal Bank of Canada	Suite 1340, 1111 West Georgia Street Vancouver, British Columbia V6E 4M3
3. Ventures West 7 Limited Partnership	Suite 280, 1285 West Fender Street, Vancouver, British Columbia V6E 4B1

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name:	**Number and Series of Preferred Share held by Shareholder:**
Interwest Investors VII, L.P.	Series A Preferred Shares: 0 Series B Preferred Shares: 131,334 Series E Preferred Shares: 33,358
Interwest Partners VII, L.P.	Series A Preferred Shares: 0 Series B Preferred Shares: 2,742,485 Series E Preferred Shares: 696,569

(collectively and individually know as the "Shareholder")

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholders after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholders' Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") by (the "IRA Amendment"):

    a. section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

    "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

    b. inserting new subsections under section 4.6 of the IRA as follows:

    "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

    (k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

c. All references to “Canadian generally accepted accounting principles” be changed to “Canadian generally accepted accounting principles or US generally accepted accounting principles” in the IRA; and

d. With respect to the IPO, all of the Shareholder’s rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO.

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the “New Equity Incentive Plan”) be deemed “Excepted Securities”, “Series E Excepted Securities” and “Current Series E Excepted Securities” as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the “Shareholders Agreement”) as follows (the “Shareholders Agreement Amendments”):

a. the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

b. section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

“4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement.”

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) (“Shareholders Agreement Termination”).

5. agrees to:

a. vote any and all of the Shareholder’s Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder’s Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together “Approved Matters”);

b. upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

c. execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED _____, 2014.

/s/ Gilbert H. Kliman

Name: Gilbert H. Kliman

Title: Managing Director

Authorized Signatory for the Shareholder

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name: California Emerging Ventures II, LLC (the "Shareholder")

Number and Series of Preferred Shares held by the Shareholder:

Series A Preferred Shares: 0
Series B Preferred Shares: 11,826
Series E Preferred Shares: 7,121

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholder after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholder's Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") by (the "IRA Amendment"):

   (a) section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

   "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   (b) inserting new subsections under section 4.6 of the IRA as follows:

   "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

   (k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

   (c) All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

(d) With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO.

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

(a) the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

(b) section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

"4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

(a) vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the [PO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

(b) upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

(c) execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED April 9th, 2014.

California Emerging Ventures II, LLC

By: GSA Partners II, LLC, its Manager
By: Grove Street Advisors, LLC, its Manager

Name: Ann St. Germain

/s/ Ann St. Germain

Title: Member & CEO

Authorized Signatory for the Shareholder

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name: Cape 1998 Trust (the "Shareholder")

Number and Series of Preferred Shares held by the Shareholder:

Series A Preferred Shares: 0
Series B Preferred Shares: 237
Series E Preferred Shares: 142

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholder after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholders' Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") by (the "IRA Amendment"):

   (a) section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

   "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   (b) inserting new subsections under section 4.6 of the IRA as follows:

   "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

   (k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

   (c) All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

(d) With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO.

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

(a) the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

(b) section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

"4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

(a) vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

(b) upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

(c) execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED April 14, 2014.

/s/ Lillian Cape

Name: Lillian Cape

Title: Trustee Cape 1998 Trust

Authorized Signatory for the Shareholder

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name:	**Number and Series of Preferred Shares held by the Shareholder:**
Mac & Co. FBO Fidelity Canadian Asset Allocation Fund	Series A Preferred Shares: 0 Series B Preferred Shares: 0 Series E Preferred Shares: 583,942
Mac & Co. FBO Fidelity Canadian Growth Company Fund	Series A Preferred Shares: 0 Series B Preferred Shares: 0 Series E Preferred Shares: 594,202
Mac & Co. FBO Fidelity Canadian Opportunities Fund	Series A Preferred Shares: 0 Series B Preferred Shares: 0 Series E Preferred Shares: 7,424
MAG & CO. FBO Fidelity Select Portfolios: Biotechnology Portfolio	Series A Preferred Shares: 0 Series B Preferred Shares: 0 Series E Preferred Shares: 981,626

(collectively and individually the "Shareholder")

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholder after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholders' Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") by (the "IRA Amendment"):

   (a) section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

   "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   (b) inserting new subsections under section 4.6 of the IRA as follows:

"(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

(k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

(c) All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

(d) With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO.

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

(a) the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

(b) section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

"4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

(a) vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other

approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

(b) upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

(c) execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED April 15, 2014.

Fidelity Investments Canada ULC as trustee of Fidelity Canadian Asset Allocation Fund

/s/ Stacie M. Smith

Name: Stacie Smith

Title: Authorized Signatory

Authorized Signatory for the Shareholder

DATED April 15, 2014.

Fidelity Investments Canada ULC as trustee of Fidelity Canadian Growth Company Fund

/s/ Stacie M. Smith

Name: Stacie Smith

Title: Authorized Signatory

Authorized Signatory for the Shareholder

DATED April 15, 2014.

Fidelity Investments Canada ULC as trustee of Fidelity Canadian Opportunities Fund

/s/ Stacie M. Smith

Name: Stacie Smith

Title: Authorized Signatory

Authorized Signatory for the Shareholder

DATED April 15, 2014.

Fidelity Select Portfolios: Biotechnology Portfolio

/s/ Stacie M. Smith

Name: Stacie Smith

Title: Deputy Treasurer

Authorized Signatory for the Shareholder

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name:	**Number and Series of Preferred Share held by Shareholder:**
Chancellor V, L.P.	Series A Preferred Shares: 0 Series B Preferred Shares: 0 Series E Preferred Shares: 939,645
Chancellor V-A, L.P.	Series A Preferred Shares: 0 Series B Preferred Shares: 0 Series E Preferred Shares: 492,821
Citiventure 2000, L.P.	Series A Preferred Shares: 0 Series B Preferred Shares: 0 Series E Preferred Shares: 148,098

(collectively and individually know as the "Shareholder")

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholders after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholders' Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") by (the "IRA Amendment"):

   (a) section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

   "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   (b) inserting new subsections under section 4.6 of the IRA as follows:

   "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

(k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

(c) All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

(d) With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO.

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

(a) the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

(b) section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

"4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

(a) vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

(b) upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

(c) execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED April 25, 2014.

/s/ Johnston L. Evans

Name: Johnston L. Evans

Title:

Authorized Signatory for the Shareholder

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name: Lipoterx Ltd. (the "Shareholder")

Number and Series of Preferred Shares held by the Shareholder:

Series A Preferred Shares: 0
Series B Preferred Shares: 0
Series E Preferred Shares: 4,207,811

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholder after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholders' Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") by (the "IRA Amendment"):

   (a) section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

   "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   (b) inserting new subsections under section 4.6 of the IRA as follows:

   "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

   (k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

   (c) All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

(d) With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO.

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

(a) the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

(b) section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

"4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

(a) vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

(b) upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

(c) execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED April 30, 2014.

/s/ Evan A. Stein

Name: Evan A. Stein MD

Title: Managing Partner

Authorized Signatory for the Shareholder

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name: MX Associates, LLP (the "Shareholder")

Number and Series of Preferred Shares held by the Shareholder:

Series A Preferred Shares: 0
Series B Preferred Shares: 0
Series E Preferred Shares: 5,972,378

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholder after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholder's Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") by (the "IRA Amendment"):

   (a) section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

   "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   (b) inserting new subsections under section 4.6 of the IRA as follows:

   "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

   (k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

   (c) All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

(d) With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO.

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

(a) the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

(b) section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

"4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

(a) vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

(b) upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

(c) execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED May 2, 2014.

/s/ August Truendle

Name: August Truendle

Title: Manager

Authorized Signatory for the Shareholder

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name: Novartis Pharma AG (the "Shareholder")

Number and Series of Preferred Shares held by the Shareholder:

Series A Preferred Shares: 0
Series B Preferred Shares: 0
Series E Preferred Shares: 1,333,333

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholder after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholder's Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") by (the "IRA Amendment"):

   (a) section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

   "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   (b) inserting new subsections under section 4.6 of the IRA as follows:

   "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

   (k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

   (c) All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

(d) With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO.

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

(a) the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

(b) section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

"4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

(a) vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

(b) upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

(c) execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED April 16, 2014.

/s/ Petra Wittlin

Name: Petra Wittlin

Title: Head of Finance NIBR Europe

Authorized Signatory for the Shareholder

DATED April 16, 2014.

/s/ Adrian Zumbach

Name: Adrian Zumbach

Title: Legal Counsel NIBR

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name: Novo A/S (the "Shareholder")

Number and Series of Preferred Shares held by the Shareholder:

Series A Preferred Shares: 0
Series B Preferred Shares: 0
Series E Preferred Shares: 437,956

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholder after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholder's Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") by (the "IRA Amendment"):

   (a) section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

   "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   (b) inserting new subsections under section 4.6 of the IRA as follows:

   "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

   (k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

   (c) All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

(d) With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO.

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

(a) the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

(b) section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

"4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

(a) vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

(b) upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

(c) execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED April 10, 2014.

/s/ Thomas Dyrberg

Name: Thomas Dyrberg

Title: Senior Partner

Authorized Signatory for the Shareholder

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name: Roche Finance Ltd. (the "Shareholder")

Number and Series of Preferred Shares held by the Shareholder:

Series A Preferred Shares: 0
Series B Preferred Shares: 0
Series E Preferred Shares: 738,615

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholder after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholder's Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") by (the "IRA Amendment"):

   a. section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

      "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   b. inserting new subsections under section 4.6 of the IRA as follows:

      "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

      (k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

   c. All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

d. With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO.

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

   a. the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

   b. section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

      "4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

   a. vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

   b. upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

c. execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED _____, 2014.

Roche Finance Ltd

Name: /s/ Carole Nuechterlein
Carole Nuechterlein

Title: Authorized Signatory

DATED _____, 2014.

Roche Finance Ltd

Name: /s/ Andreas Knierzinger
Andreas Knierzinger

Authorized Signatory

Authorized Signatory for the Shareholder

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name: Takeda Pharmaceutical Company Limited (the "Shareholder")

Number and Series of Preferred Shares held by the Shareholder:

Series A Preferred Shares: 0
Series B Preferred Shares: 0
Series E Preferred Shares: 524,016

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholder after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholder's Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") as set forth below:

   a. section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

      "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   b. inserting new subsections under section 4.6 of the IRA as follows:

      "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

      (k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

   c. All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

d. With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO,

the above which shall hereinafter be referred to as the "IRA Amendment".

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

a. the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

b. section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

"4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

a. vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

b. upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

c. execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED April 15, 2014.

/s/ for Icen Aralia

Name: for Icen Aralia

Title: VP, Global R&D, Takeda Pharmaceutical Company Ltd.

Authorized Signatory for the Shareholder

XENON PHARMACEUTICALS INC.

(the "Corporation")

CONSENT AND AGREEMENT TO VOTE

Shareholder Information:

Name: Takeda Ventures, Inc. (previously known as Takeda Research Investment, Inc.) (the "Shareholder")

Number and Series of Preferred Shares held by the Shareholder:

Series A Preferred Shares: 0
Series B Preferred Shares: 0
Series E Preferred Shares: 529,926

(the above together with any other shares of the Corporation acquired or to be acquired by the Shareholder after the date of this consent and agreement to vote that are entitled to vote at the Corporation's shareholders' meeting(s) called to consider the matters (or part thereof) shall together be referred to below, the "Shareholder's Shares")

For good and valuable consideration (which is acknowledged), the Shareholder irrevocably:

1. consents to the amendment of the Amended and Restated Investor Rights Agreement dated December 6th, 2006, as amended from time to time (the "IRA") as set forth below:

   a. section 4.4 (a) of the IRA (under the heading "Termination and Waiver of Rights of First Refusal") be deleted in its entirety and be replaced with the following:

      "effective date of the registration statement pertaining to a firmly underwritten initial public offering by the Company, if such offering is on terms as approved by the Board of Directors of the Company and will be completed on or before December 31, 2014 and will result in the common shares of the Company to be listed or quoted upon a recognized senior stock exchange or public securities quotation system (including without limitation, the Toronto Stock Exchange or the NASDAQ National Market) (the "IPO")";

   b. inserting new subsections under section 4.6 of the IRA as follows:

      "(j) up to a maximum number of common shares of the Company that is equal to US$5 million divided by the issue price per common share of the Company as approved by the Board of Directors of the Company in the IPO by way of private placement in connection with a collaboration arrangement;

      (k) all Equity Securities of the Company issued pursuant to or in connection with the IPO."

   c. All references to "Canadian generally accepted accounting principles" be changed to "Canadian generally accepted accounting principles or US generally accepted accounting principles" in the IRA; and

d. With respect to the IPO, all of the Shareholder's rights under section 2.2 to 2.12 (inclusive) and 2.14 of the IRA are waived and no such right shall apply to or be effective in relation to the IPO,

the above which shall hereinafter be referred to as the "IRA Amendment".

2. approves that all options (and related Common Shares) issuable under the 2014 Equity Incentive Plan as approved by the Board of Directors and to be confirmed and adopted by the shareholders meeting to be held on or before June 30, 2014 (the "New Equity Incentive Plan") be deemed "Excepted Securities", "Series E Excepted Securities" and "Current Series E Excepted Securities" as such terms are used in the share rights set out in the Articles (Schedule A to the Addendum) of the Corporation.

3. consents to the amendment of the amended and restated shareholders agreement dated December 6th, 2006, as amended from time to time (the "Shareholders Agreement") as follows (the "Shareholders Agreement Amendments"):

a. the whole of article 2 of the Shareholders Agreement be deleted but if by December 31, 2014, the closing of the IPO has not occurred, such Article 2 shall be deemed to be reinstated into the Shareholders Agreement without further action from the Corporation or any of the shareholders of the Corporation;

b. section 4.12 of the Shareholders Agreement be deleted in its entirety and by replaced by the following:

"4.12 Termination — This Agreement may be terminated upon written agreement or consent of Founders holding not less than 75% of the aggregate number of Shares held by all Founders and by Investors holding not less than 75% of the aggregate number of Shares held by all Investors as at the time of such agreement or consent. Any such written agreement or consent to terminate shall be binding on all parties to the Agreement."

4. agrees that the Shareholders Agreement shall be terminated upon closing of the IPO (as defined above) ("Shareholders Agreement Termination").

5. agrees to:

a. vote any and all of the Shareholder's Shares in the capital of the Corporation owned or beneficially owned by the Shareholder, and all shares in the capital of the Corporation over which the Shareholder has a proxy to vote, including but not limited to the Shareholder's Shares, in favour of any resolution that the Corporation may put before shareholders of the Corporation at one or more shareholders meetings to be held on or before June 30, 2014 (i) for approval, ratification or confirmation of the aforementioned New Equity Incentive Plan, IRA Amendment, Shareholders Agreement Amendment, or Shareholders Agreement Termination, and any other approvals related to the foregoing and (ii) for approval of the consolidation of the common shares of the Corporation prior to the IPO and the adoption of new articles and bylaws for the Corporation in preparation for or in connection with the closing of the IPO (including if the directors deem appropriate, the creation of a new class of preferred shares issuable in series), and any other approvals related to the foregoing, each as approved by the Board of Directors of the Corporation and in connection with the IPO or in preparation for the IPO ((i) and (ii) together "Approved Matters");

b. upon written request or direction of the Corporation, execute and not revoke a form of proxy appointing any director of the Corporation as proxy, with full power of substitution, to attend, vote and otherwise act for and on behalf of the Shareholder in respect of all of the Shareholder's Shares in respect of all such matters which may come before a meeting of the shareholders of the Corporation relating to the Approved Matters; and

c. execute all such documents and take all such other action as may in the opinion of the Corporation be necessary or desirable in connection with the foregoing.

6. acknowledges and agrees that this consent and agreement to vote constitutes a legal, valid and binding agreement of the Shareholder for which good and valuable consideration has been received.

All defined terms used in this consent and agreement to vote shall have the meanings set out above and the definitions in the IRA and Shareholders Agreement shall only apply to any text in quotes relating to suggested amendments to such agreements.

DATED April 15, 2014.

/s/ G.R. Martin

Name: G. R. Martin

Title: President & CEO

Authorized Signatory for the Shareholder

JOINDER TO INVESTOR RIGHTS AGREEMENT

This Joinder (this "Agreement") is delivered and effective as of November 7, 2013, by Lexington Private Equity VI, L.P. ("Lexington") pursuant to that certain Amended and Restated Investor Rights Agreement of Xenon Pharmaceuticals Inc. (the "Company"), dated as of December 6, 2006 (as amended, the "Investor Rights Agreement"). Terms defined in the Investor Rights Agreement and not otherwise defined herein shall have the meanings ascribed to them in the Investor Rights Agreement.

WHEREAS, on the date hereof, Lexington acquired the 435,037 shares of Series E Preferred Stock of the Company (the "Transferred Shares") held by J.P. Morgan Partners (BHCA), L.P. (the "Transferor"), and all the rights and obligations with respect thereto (the "Transfer"); and

NOW, THEREFORE, in connection with the Transfer, Lexington hereby agrees as follows:

1. Upon execution of this Agreement, Lexington shall become a party to the Investor Rights Agreement and shall be bound by all the terms and provisions thereof. Lexington shall succeed to all rights and be subject to all the obligations of the Transferor with respect to the Transferred Shares as set forth in the Investor Rights Agreement, including without limitation pursuant to Sections 2.10, 4.5 and 10.3 thereof, and become a Holder, Investor and Major Investor thereunder.

2. The Transferee's execution of a signature page to this Agreement shall constitute the execution by the Transferee of a counterpart signature page to the Investor Rights Agreement with respect to the Transferred Shares.

3. The Transferee hereby requests that the Company update Exhibits A and B to the Investor Rights Agreement and its books and records to reflect the Transfer. For purposes of delivering any notices, requests and other communications under the Investor Rights Agreement, the address of the Lexington is included on its signature page hereto.

4. This Agreement shall be governed by and construed under the laws of the Province of British Columbia.

[*Signature Page follows*]

The parties have executed this Agreement as of the date first set forth above.

LEXINGTON PRIVATE EQUITY VI, L.P.

By: Archer Venture Acquisitions 1, LLC,
its general partner

By: Lexington Partners GP Holdings VII LLC,
its sole member

By: Lexington Partners L.P.,
its sole member

By: /s/Thomas Giannetti
Name: Thomas Giannetti
Title: Chief Financial Officer

c/o Lexington Partners L.P.
660 Madison Avenue, 23rd Floor
New York, NY 10021-8405
Attention: Thomas Giannetti
Telephone: (212) 754-0411
Fax: (212) 754-1494
Email: tgiannetti@lexpartners.com

with a required copy to (which shall not constitute notice):

Proskauer Rose LLP
1 International Place
Boston, MA 02110-2600
Attention: Sean Hill and Ori Solomon
Telephone: (617) 526-9600
Fax: (617) 526-9899
Email: lexdeals@proskauer.com

JOINDER TO INVESTOR RIGHT AGREEMENT

(International Business Machines Corporation)

This Joinder (this "Agreement") is delivered and effective as of December 4, 2013, by International Business Machines Corporation ("IBM") pursuant to that certain Amended and Restated Investor Rights Agreement of Xenon Pharmaceuticals Inc. (the "Company") dated as of December 6, 2006, as amended, (the "Investor Rights Agreement"). Terms defined in the Investor Rights Agreement and not otherwise defined herein shall have the meanings ascribed to them in the Investor Rights Agreement.

WHEREAS, on the date hereof, IBM acquired the 7,121 shares of Series E Preferred Shares and the 11,826 shares of Series B Preferred Shares of the Company (the "Transferred Shares") held by Ventures West 7 U.S. Limited Partnership (the "Transferor"), and all the rights and obligations with respect thereto (the "Transfer"); and

NOW, THEREFORE, in connection with the Transfer, IBM hereby agrees as follows:

1. Upon execution of this Agreement, IBM shall become a party to the Investor Rights Agreement and shall be bound by all terms and provisions thereof. IBM shall succeed to all rights and be subject to all the obligations of the Transferor with respect to the Transferred Shares as set forth in the Investor Rights Agreement, and become a Holder and Investor thereunder.

2. The Transferee's execution of a signature page to this Agreement shall constitute the execution by the Transferee of a counterpart signature page to the Investor Rights Agreement with respect to the Transferred Shares.

3. The Transferee hereby requests that the Company update its books and records to reflect the Transfer. For purposes of delivering any notices, requests and other communications under the Investor Rights Agreement, the address of IBM is included on its signature page hereto.

4. This Agreement shall be governed by and construed under the laws of the Province of British Columbia.

[Signature Page follows]

Duly-authorized signatory of IBM has executed this Agreement below, effective as of the date first set forth above.

INTERNATIONAL BUSINESS MACHINES CORPORATION

By: /s/ Robert Pemberton
Name: Robert Pemberton
Title: Vice President, Corporate Development

Contact information for International Business Machines Corporation:

International Business Machines Corporation
New Orchard Road, MD 250
Armonk, NY 10504
Attention: Kevin G. Liddy
Telephone: 314-252-6030
Facsimile: 314-252-4336
Email: kgliddy@us.ibm.com

SIGNATURE PAGE TO JOINDER TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT XENON PHARMACEUTICALS INC.

JOINDER TO INVESTOR RIGHT AGREEMENT

(California Emerging Ventures H, LLC)

This Joinder (this "Agreement") is delivered and effective as of December 4, 2013, by California Emerging Ventures II, LLC ("CEV II") pursuant to that certain Amended and Restated Investor Rights Agreement of Xenon Pharmaceuticals Inc. (the "Company") dated as of December 6, 2006, as amended, (the "Investor Rights Agreement"). Terms defined in the Investor Rights Agreement and not otherwise defined herein shall have the meanings ascribed to them in the Investor Rights Agreement.

WHEREAS, on the date hereof, CEV II acquired the 7,121 shares of Series E Preferred Shares and the 11,826 shares of Series B Preferred Shares of the Company (the "Transferred Shares") held by Ventures West 7 U.S. Limited Partnership (the "Transferor"), and all the rights and obligations with respect thereto (the "Transfer"); and

NOW, THEREFORE, in connection with the Transfer, CEV II hereby agrees as follows:

1. Upon execution of this Agreement, CEV II shall become a party to the Investor Rights Agreement and shall be bound by all terms and provisions thereof. CEV II shall succeed to all rights and be subject to all the obligations of the Transferor with respect to the Transferred Shares as set forth in the Investor Rights Agreement, and become a Holder and Investor thereunder.

2. The Transferee's execution of a signature page to this Agreement shall constitute the execution by the Transferee of a counterpart signature page to the Investor Rights Agreement with respect to the Transferred Shares.

3. The Transferee hereby requests that the Company update its books and records to reflect the Transfer. For purposes of delivering any notices, requests and other communications under the Investor Rights Agreement, the address of CEV II is included on its signature page hereto.

4. This Agreement shall be governed by and construed under the laws of the Province of British Columbia.

[Signature Page follows]

Duly-authorized signatory of CEV II has executed this Agreement below, effective as of the date first set forth above.

CALIFORNIA EMERGING VENTURES II, LLC

By: GSA Partners II, LLC, its Manager
by: Grove Street Advisors, LLC, its Manager

By: /s/ Ann St. Germain
Name: ANN ST. GERMAIN
Title: MEMBER & CFO

Contact Information for California Emerging Ventures II, LLC:

California Emerging Ventures II, LLC
c/o Merrill Lynch
1000 Federal Street, 17th Floor
Boston, MA 02110
Attention: Andrew Lodoen
Telephone: 617-846-4185
Facsimile: 617-830-6026
Email: Andrew_lodoen@ml.com

California Emerging Ventures II, LLC
c/o Grove Street Advisors, LLC
20 William Street, Sutie 230
Wellesley, MA 02481
Attention: Ann St. Germain
Telephone: 781-263-6140
Facsimile: 781-263-6101
Email: ams@grovestreet.com

SIGNATURE PAGE TO JOINDER TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT XENON PHARMACEUTICALS INC.

JOINDER TO INVESTOR RIGHT AGREEMENT (BancBoston Capital Inc.)

This Joinder (this "Agreement") is delivered and effective as of December 4, 2013, by BancBoston Capital Inc. ("BancBoston") pursuant to that certain Amended and Restated Investor Rights Agreement of Xenon Pharmaceuticals Inc. (the "Company") dated as of December 6, 2006, as amended, (the "Investor Rights Agreement"). Terms defined in the Investor Rights Agreement and not otherwise defined herein shall have the meanings ascribed to them in the Investor Rights Agreement.

WHEREAS, on the date hereof, BancBoston acquired the 4,795 shares of Series E Preferred Shares and the 7,961 shares of Series B Preferred Shares of the Company (the "Transferred Shares") held by Ventures West 7 U.S. Limited Partnership (the "Transferor"), and all the rights and obligations with respect thereto (the "Transfer"); and

NOW, THEREFORE, in connection with the Transfer, BancBoston hereby agrees as follows:

1. Upon execution of this Agreement, BancBoston shall become a party to the Investor Rights Agreement and shall be bound by all terms and provisions thereof. BancBoston shall succeed to all rights and be subject to all the obligations of the Transferor with respect to the Transferred Shares as set forth in the Investor Rights Agreement, and become a Holder and Investor thereunder.

2. The Transferee's execution of a signature page to this Agreement shall constitute the execution by the Transferee of a counterpart signature page to the Investor Rights Agreement with respect to the Transferred Shares.

3. The Transferee hereby requests that the Company update its books and records to reflect the Transfer. For purposes of delivering any notices, requests and other communications under the Investor Rights Agreement, the address of BancBoston is included on its signature page hereto.

4. This Agreement shall be governed by and construed under the laws of the Province of British Columbia.

[Signature Page follows]

Duly-authorized signatory of BancBoston has executed this Agreement below, effective as of the date first set forth above.

BANCBOSTON CAPITAL INC.

By: /s/ Andrew T. Golomb
Name: Andrew T. Golomb
Title: Director

Contact Information for BancBoston Capital Inc.:

BancBoston Capital Inc.
c/o Bank of America
101 South Tryon Street
Charlotte, NC 28255
Attention: Andrew T. Golomb
Telephone: 980-387-1966
Facsimile: 704-208-2782
Email: andrew.t.golomb@baml.com

With a copy to:
BancBoston Capital Inc.
c/o Corrum Capital Management LLC
214 North Tryon Street
Suite 1950
Charlotte, NC 28202
Attention: Andrew Lobas, Associate
Telephone: 704-330-7314
Email: alobas@corrumcapital.com

SIGNATURE PAGE TO JOINDER TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT XENON PHARMACEUTICALS INC.

JOINDER TO INVESTOR RIGHT AGREEMENT

(Cape 1998 Trust)

This Joinder (this "Agreement") is delivered and effective as of December 4, 2013, by Cape 1998 Trust pursuant to that certain Amended and Restated Investor Rights Agreement of Xenon Pharmaceuticals Inc. (the "Company") dated as of December 6, 2006, as amended, (the "Investor Rights Agreement"). Terms defined in the Investor Rights Agreement and not otherwise defined herein shall have the meanings ascribed to them in the Investor Rights Agreement.

WHEREAS, on the date hereof, Cape 1998 Trust acquired the 142 shares of Series E Preferred Shares and the 237 shares of Series B Preferred Shares of the Company (the "Transferred Shares") held by Ventures West 7 U.S. Limited Partnership (the "Transferor"), and all the rights and obligations with respect thereto (the "Transfer"); and

NOW, THEREFORE, in connection with the Transfer, Cape 1998 Trust hereby agrees as follows:

1. Upon execution of this Agreement, Cape 1998 Trust shall become a party to the Investor Rights Agreement and shall be bound by all terms and provisions thereof. Cape 1998 Trust shall succeed to all rights and be subject to all the obligations of the Transferor with respect to the Transferred Shares as set forth in the Investor Rights Agreement, and become a Holder and Investor thereunder.

2. The Transferee's execution of a signature page to this Agreement shall constitute the execution by the Transferee of a counterpart signature page to the Investor Rights Agreement with respect to the Transferred Shares.

3. The Transferee hereby requests that the Company update its books and records to reflect the Transfer. For purposes of delivering any notices, requests and other communications under the Investor Rights Agreement, the address of Cape 1998 Trust is included on its signature page hereto.

4. This Agreement shall be governed by and construed under the laws of the Province of British Columbia.

[Signature Page follows]

Duly-authorized signatory of Cape 1998 Trust has executed this Agreement below, effective as of the date first set forth above.

CAPE 1998 TRUST

By: /s/ Lillian J. Cape
Name: Lillian J. Cape
Title: Trustee

Contact Information for Cape 1998 Trust:

Cape 1998 Trust
c/o Howson & Simon LLP
101 Ygnacio Valley Road,
Suite 310
Walnut Creek, CA94596
Attention: Carla S. Lundstrom
Telephone: 925-977-9060
Facsimile: 925-977-9064
Email: clundstrom@howson-simon.com

with a copy to:

Cape 1998 Trust
c/o Lillian Cape, Trustee
1750 Taylor Street, #2001
San Francisco, CA 94133
Telephone: 415-923-9876
Email: libisf@me.com

SIGNATURE PAGE TO JOINDER TO AMENDED AND RESTATED INVESTOR RIGHTS AGREEMENT XENON PHARMACEUTICALS INC.

Exhibit 5.1

McCarthy Tétrault LLP
Suite 1300, 777 Dunsmuir Street
P.O. Box 10424, Pacific Centre
Vancouver BC V7Y 1K2
Canada
Tel: 604-643-7100
Fax: 604-643-7900

October 6, 2014

Xenon Pharmaceuticals Inc.
200 – 3650 Gilmore Way
Burnaby, BC V5G 4W8
Canada

Dear Sirs/Mesdames:

Re: Registration Statement on Form S-1 of Xenon Pharmaceuticals Inc.

We have acted as Canadian counsel to Xenon Pharmaceuticals Inc. (the "**Company**"), a corporation continued under the federal laws of Canada, in connection with the Registration Statement on Form S-1 (Registration No. 333-198666), as amended (the "**Registration Statement**"), filed by the Company with the Securities and Exchange Commission (the "**SEC**") relating to the registration under the Securities Act of 1933, as amended, of 4,600,000 common shares of the Company (the "**Shares**"), all of which (including up to 600,000 common shares of the Company issuable upon the exercise of an over-allotment option granted by the Company to the underwriters) will be issued and sold by the Company. We understand that the Shares are to be sold to the underwriters for resale to the public as described in the Registration Statement and pursuant to an underwriting agreement, substantially in the form filed as an exhibit to the Registration Statement, to be entered into by and among the Company and the underwriters (the "**Underwriting Agreement**").

In connection with giving this opinion, we have examined the Registration Statement (including exhibits thereto). We have also examined originals, certified or otherwise identified to our satisfaction, of such public and corporate records, certificates, instruments and other documents as we have considered necessary in order to express the opinion set out below. With respect to the accuracy of factual matters material to this opinion, we have relied upon certificates or comparable documents and representations of public officials and of officers and representatives of the Company.

In giving this opinion, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity to original documents of all documents submitted to us as copies, certified or otherwise identified to our satisfaction. We have also considered such questions of law as we have deemed relevant and necessary as a basis for the opinion hereinafter expressed.

The opinion expressed herein is limited to matters governed by the laws of the Province of British Columbia and the laws of Canada applicable therein.

Based and relying upon and subject to the foregoing, we are of the opinion that the Shares to be issued and sold by the Company have been duly authorized and, when the Shares are issued and paid for in accordance with the terms of the Underwriting Agreement, the Shares will be validly issued, fully paid and non-assessable shares in the capital of the Company.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the use of our name under the caption "Legal Matters" in the prospectus forming part of the Registration Statement.

This opinion is effective as at the date hereof and is based upon laws in effect and facts in existence as at the date hereof. We express no opinion as to the effect of future laws or judicial decisions on the subject matter hereof, nor do we undertake any duty to modify this opinion to reflect subsequent facts or developments concerning the Company or developments in the law occurring after the date hereof.

Yours very truly,

/s/ McCarthy Tétrault LLP

Exhibit 10.1

EXECUTION VERSION

EXCLUSIVE COLLABORATIVE RESEARCH AND OPTION AGREEMENT

by and between

MERCK SHARP & DOHME RESEARCH LTD.

and

XENON PHARMACEUTICALS INC.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

EXECUTION VERSION

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EXECUTION VERSION

EXCLUSIVE COLLABORATIVE RESEARCH AND OPTION AGREEMENT

This Exclusive Collaborative Research and Option Agreement (the "**Agreement**") is effective as of June 10, 2009 (the "**Effective Date**") and is entered into by and between MERCK SHARP & DOHME RESEARCH LTD., a company organized and existing under the laws of Bermuda ("**Merck**"), and XENON PHARMACEUTICALS INC., a corporation organized and existing under the laws of Canada ("**Xenon**").

RECITALS:

WHEREAS, Xenon is a research-based company focused on new drug discovery and development of pharmaceutical products;

WHEREAS, Merck discovers, develops, manufactures and markets vaccines and medicines for the treatment of human diseases and/or conditions; and

WHEREAS, Xenon and Merck wish to enter into this Agreement for the purpose of carrying out collaborative research activities to: (i) validate genes and proteins as therapeutic targets in the field of [†]; and (ii) identify, optimize and develop modulators of such therapeutic targets, and to enable Merck to develop and commercialize products that are discovered and developed as a result of such research activities, all upon the terms set out in this Agreement.

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Merck and Xenon hereby agree as follows:

ARTICLE 1 DEFINITIONS

The following terms, whether used in the singular or plural, shall have the respective meanings set forth below.

1.1 "**Act**" means, as applicable, the United States Federal Food, Drug and Cosmetic Act, 21 U.S.C. §§ 301 et seq., as such may be amended from time-to-time.

1.2 "**Affiliate**" of a Party means: (1) any corporation or other Person of which fifty percent (50%) or more of the securities or other ownership interests representing the equity, the voting stock or general partnership interest are owned, controlled or held, directly or indirectly, by such Party; or (2) any corporation or other Person which, directly or indirectly, owns, controls or holds fifty percent (50%) (or the maximum ownership interest permitted by law) or more of the securities or other ownership interests representing the equity, the voting stock or general partnership interest of such Party; or (3) any corporation or other Person of which fifty percent (50%) or more of the securities or other ownership interests representing the equity, the voting stock or general partnership interest are owned, controlled or held, directly or indirectly, by a corporation or other Person described in (1) or (2).

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

1.3 "**Agreement**" means this Exclusive Collaborative Research and Option Agreement, including all exhibits, attachments and research plans and any amendments made pursuant to the provisions of Section 10.7.

1.4 "**Agreement Finalization Period**" shall have the meaning given such term in Section 3.10.5.

1.5 "**Approval by Merck**" or "**Approved by Merck**" means, with respect to any Milestone event described herein as requiring approval by Merck, the approval of such event by the internal committee of Merck that is responsible for the research and development activities that include such event, in each case applying the criteria for approval that is customarily applied by that internal committee of Merck.

1.6 "**Calendar Quarter**" means the respective periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31.

1.7 "**Calendar Year**" means each successive period of twelve (12) months commencing on January 1 and ending on December 31.

1.8 "**CFR**" means the United States Code of Federal Regulations, as amended and in effect from time-to-time.

1.9 "**Change of Control**" shall have the meaning given such term in Section 9.5.2.

1.10 "**Clinical Trial**" means a Phase I Clinical Trial, Phase II Clinical Trial or Phase III Clinical Trial, as applicable.

1.11 "**Co-Funded Product**" shall have the meaning given such term in Section 3.5.

1.12 "**Combination Product**" means a Product which includes one or more active ingredients, other than a Compound, in combination with a Compound. [†].

1.13 "**Commencement of Lead Optimization**" means the Approval by Merck of the Lead Optimization Package for a Lead Compound to enter the lead optimization stage of the discovery process.

1.14 "**Commercialization**" or "**Commercialize**" means activities directed to marketing, advertising, promoting, distributing, importing, exporting and selling.

1.15 "**Commercially Reasonable Efforts**" means, with respect to the efforts to be expended by a Party with respect to any objective hereunder, [†].

1.16 "**Compound**" means any chemical entity that modulates a Target [†] and is either: (i) [†]; or (ii) [†].

1.17 "**Control**", "**Controls**" or "**Controlled by**" means, with respect to any item of or right under Xenon Know-How or Xenon Patent Rights or Merck Know-How or Merck Patent Rights, the possession of (whether by ownership or license, other than pursuant to this Agreement) or the ability of a Party to grant access to, or a license or sublicense of, such item or right as provided for herein without violating the terms of any agreement or other arrangement with any Third Party existing at the time such Party would be required hereunder to grant the other Party such access or license or sublicense.

1.18 "**Covering**", "**Cover**", or "**Covered**" means, with respect to a Patent Right, that, but for a license granted to a party under a claim included in such Patent Right, the practice by such party of an invention claimed in such Patent Right would infringe such claim or in the case of a Patent Right that is a patent application, would infringe a claim in such patent application if it were to issue as a patent.

1.19 "**Effective Date**" shall have the meaning given such term in the preamble to this Agreement.

1.20 "**Election Notice**" shall have the meaning given such term in Section 3.10.3.

1.21 "**EMEA**" means the European Medicines Evaluation Agency and the Committee for Proprietary Medicinal Products or any successor agencies thereof or, to the extent the mutual recognition procedure is used for the Compound or Product in the EU, any governmental authority having the authority to regulate the sale of medicinal or pharmaceutical products in any country in the EU.

1.22 "**EU**" means all countries that are member states of the European Union as of the Effective Date of this Agreement.

1.23 "**Exclusive Review Period**" shall have the meaning given such term in Section 3.10.3.

1.24 "**FDA**" means the United States Food and Drug Administration.

1.25 "**Field**" means [†].

1.26 "**Filing**" of an NDA means the acceptance by a Regulatory Authority of an NDA for filing.

1.27 "**First Commercial Sale**" means, with respect to any Product, the first sale for end use or consumption of such Product in any country in the Territory; excluding, however, any sale or other distribution for use in a Clinical Trial.

1.28 "**FTE Rate**" shall mean the amount Merck will pay to Xenon over a consecutive twelve (12) month period during the Research Program to support one (1) Xenon FTE dedicated to the Research Program. The FTE Rate shall be [†] Dollars ($[†]) per FTE. The FTE Rate shall [†].

1.29 "**Full-Time Equivalent**" or "**FTE**" means the equivalent of a full-time scientist's work time over a twelve (12) month period (including normal vacations, sick days and holidays). The portion of an FTE year devoted by a scientist to the Research Program shall be determined by [†].

1.30 "**GLP**" or "**Good Laboratory Practice**" means the applicable then-current standards for laboratory activities for pharmaceuticals or biologicals, as set forth in the Act and any regulations or guidance documents promulgated thereunder, as amended from time-to-time, together with any similar standards of good laboratory practice as are required by any Regulatory Authority in the Territory.

1.31 "**GMP**" means, in respect of the manufacture of a Compound or Product, the then current Good Manufacturing Practices as such term is defined from time-to-time by the FDA, and provided for in

21 CFR Parts 210-211, or other relevant Regulatory Authority having jurisdiction over the development, manufacture or Commercialization of the Compound or Product in the Territory pursuant to its regulations, guidelines or otherwise.

1.32 "**Identification of First Lead Compound for a Target**" means the Approval by Merck of the first Compound as a Lead Compound, [†].

1.33 "**IND**" means an investigational new drug application, clinical study application, clinical trial exemption, or similar application or submission for approval to conduct human clinical investigations filed with or submitted to a Regulatory Authority in conformance with the requirements of such Regulatory Authority.

1.34 "**Indication**" means [†].

1.35 "**Information**" means any and all information and data, including without limitation all Merck Know-How, all Xenon Know-How, and all other scientific, pre-clinical, clinical, regulatory, manufacturing, marketing, financial and commercial information or data, whether communicated in writing or orally or by any other method, which is provided by one Party to the other Party in connection with this Agreement.

1.36 "**Initiates**", "**Initiated**" or "**Initiation**" means, with respect to a Clinical Trial, the administration of the first dose to the first patient in such Clinical Trial.

1.37 "**Insolvency Event**" means the filing or institution of bankruptcy, liquidation or receivership proceedings before a court or tribunal with proper jurisdiction under or pursuant to the laws of Canada.

1.38 "**Internal Research Purposes**" means [†].

1.39 "**Invention**" means any [†].

1.40 "**JDC**" shall have the meaning given such term in Section 3.8.

1.41 "**Joint Know-How**" means all information and materials, including, but not limited to, discoveries, improvements, processes, methods, protocols, formulas, data, Inventions, know-how and trade secrets, patentable or otherwise, that are discovered, developed, created or invented: (1) [†]and (2) [†].

1.42 "**Joint Patent Rights**" means Patent Rights that claim or Cover any Joint Know-How.

1.43 "**Joint Research Program Technology**" means Joint Know-How and Joint Patent Rights.

1.44 "**JSC**" shall have the meaning given such term in Section 2.7.

1.45 "**Know-How Royalty Rate**" shall have the meaning given such term in Section 6.4.1(b).

1.46 "**Know-How Royalty Term**" shall have the meaning given such term in Section 6.4.1(b).

1.47 "**Lead Compound**" means a Compound Approved by Merck as a Compound that satisfies the Lead Compound Criteria.

1.48 "**Lead Compound Criteria**" means [†].

1.49 [†].

1.50 "**Marketing Authorization**" means all approvals from the relevant Regulatory Authority necessary to market and sell a Product in any country in the Territory (including without limitation all applicable pricing and governmental reimbursement approvals even if not legally required to sell the Product in a country).

1.51 "**Merck**" shall have the meaning given such term in the preamble to this Agreement.

1.52 "**Merck Background Technology**" means Merck Know-How and Merck Patent Rights.

1.53 "**Merck Know-How**" means [†], which: (1) [†], (2) [†], (3) [†], and (4) [†].

1.54 "**Merck Option**" means the option granted to Merck pursuant to Section 3.1.

1.55 "**Merck Option Period**" means, subject to earlier termination of this Agreement pursuant to Sections 9.2 or 9.3, the period commencing on the Effective Date and ending on that date that is [†] days following the expiration of the Research Program Term.

1.56 "**Merck Patent Rights**" means Patent Rights which [†] (1) [†], and (2) [†].

1.57 "**Merck Research Program Technology**" means [†] (1) [†] and (2) [†].

1.58 "**Merck Technology**" means Merck Background Technology and Merck Research Program Technology.

1.59 "**Milestone**" means each of the milestones listed in Sections 6.3.1, 6.3.2 and 6.3.3.

1.60 "**NDA**" means a New Drug Application, Biologics License Application, Community-Wide Marketing Application, Marketing Authorization Application, filing pursuant to Section 510(k) of the Act, or similar application or submission for Marketing Authorization of a Product filed with a Regulatory Authority to obtain marketing approval for a biological or pharmaceutical product in that country or in that group of countries.

1.61 "**NDA Approval**" means approval of an NDA by the FDA, EMEA or other applicable Regulatory Authority in any country in the Territory.

1.62 "**Net Sales**" means [†]

1.62.1 [†];

1.62.2 [†];

1.62.3 [†]; and

1.62.4 [†].

With respect to sales of Combination Products, Net Sales shall be [†].

1.63 "**Option Exercise Fee**" shall have the meaning given such term in Section 3.4.

1.64 "**Party**" means Merck or Xenon, individually, and "**Parties**" means Merck and Xenon, collectively.

1.65 "**Person**" means any individual, partnership, corporation, trust or any other entity that has legal capacity to own property in its own name or to sue or be sued.

1.66 "**Patent Rights**" means any and all patents and patent applications in the Territory (which for the purpose of this Agreement shall be deemed to include certificates of invention and applications for certificates of invention), including divisionals, continuations, continuations-in-part, reissues, renewals, substitutions, registrations, re-examinations, revalidations, extensions, supplementary protection certificates and other governmental actions that extend any of the patents and patent applications, and all foreign equivalents of the foregoing.

1.67 "**Patent Royalty Rate**" shall have the meaning given such term in Section 6.4.1(a)(iii).

1.68 "**Patent Royalty Term**" shall have the meaning given such term in Section 6.4.1(a)(iii).

1.69 "**Phase I Clinical Trial**" means a human clinical trial of a Product or Compound in any country in the Territory that would satisfy the requirements of 21 CFR 312.21(a).

1.70 "**Phase II Clinical Trial**" means a human clinical trial in any country in the Territory performed in a patient population with the primary goal being to estimate the clinical efficacy effect of a Compound or Product.

1.71 "**Phase III Clinical Trial**" means a human clinical trial in any country in the Territory that would satisfy the requirements of 21 CFR 312.21(c).

1.72 [†].

1.73 [†].

1.74 "**Product**" means [†] (1) [†]; or (2) [†].

1.75 "**Proposed Transaction**" means:

(a) [†]; or

(b) [†].

1.76 "**Regulatory Authority**" means any applicable government regulatory authority involved in granting approvals for the manufacturing, marketing, sale, reimbursement and/or pricing of a Product in the Territory, including, in the United States, the FDA and any successor governmental authority having substantially the same function.

1.77 "**Related Party**" means, in respect of Merck, each of its Affiliates, and each of the respective licensees and sublicensees of Merck and its Affiliates (which term does not include distributors), as applicable.

1.78 "**Research Plan**" means the preclinical research plan attached hereto as Exhibit 1.78. The Research Plan provides, among other things, that [†]. In the event of a conflict between the terms of this Agreement and the Research Plan, the terms of this Agreement shall govern.

1.79 "**Research Program**" means the research activities undertaken by the Parties as set forth in Article 2 and includes, without limitation, the research activities described in the Research Plan and in each Target Validation Plan and Target Drug Discovery Plan.

1.80 "**Research Program Technology**" means Xenon Research Program Technology, Merck Research Program Technology, and Joint Research Program Technology, collectively.

1.81 "**Research Program Term**" means the duration of the Research Program as described in Section 2.2.

1.82 [†].

1.83 "**Target**" means any human protein or gene: (1) [†] or (2) [†].

1.84 "**Target Candidate**" shall have the meaning given such term in Section 2.5.1.

1.85 "**Target Drug Discovery Plan**" means the written research plan, [†]. In the event of a conflict between the terms of this Agreement and a Target Drug Discovery Plan, the terms of this Agreement shall govern.

1.86 "**Target Product Profile** shall have the meaning given such term in Section 2.5.3.

1.87 "**Target Termination Notice**" shall have the meaning given such term in Section 3.9.1.

1.88 "**Target Validation Plan**" means the written research plan, [†]. In the event of a conflict between the terms of this Agreement and a Target Validation Plan, the terms of this Agreement shall govern.

1.89 "**Term Sheet Finalization Period**" shall have the meaning given such term in Section 3.10.4.

1.90 "**Territory**" means all of the countries in the world, and their territories and possessions.

1.91 "**Third Party**" means any Person other than Merck and its Related Parties, and Xenon and its Affiliates.

1.92 "**Transferred Product**" shall have the meaning given such term in Section 3.9.1.

1.93 "**Valid Patent Claim**" means [†].

1.94 "**Xenon**" shall have the meaning given such term in the preamble to this Agreement.

1.95 "**Xenon Background Technology**" means Xenon Know-How and Xenon Patent Rights.

1.96 "**Xenon Extreme Genetics**" means [†].

1.97 "**Xenon Know-How**" means [†].

1.98 "**Xenon Option**" shall have the meaning given such term in Section 3.5.

1.99 "**Xenon Patent Prosecution**" shall have the meaning given such term in Section 8.1.1(c).

1.100 "**Xenon Patent Rights**" means [†].

1.101 "**Xenon Research Program Technology**" means [†].

1.102 "**Xenon Target Validation Criteria**" means the written criteria for validation of a Target Candidate by Xenon [†]. Such Xenon Target Validation Criteria shall be attached hereto as Exhibit 1.102 and become part of this Agreement.

1.103 "**Xenon Technology**" means Xenon Background Technology and Xenon Research Program Technology.

1.104 "**Xenon-Validated Target**" means [†].

ARTICLE 2 RESEARCH PROGRAM

2.1 **General.**

Xenon and Merck shall conduct research activities pursuant to the provisions of this Agreement and the Research Program to validate Target Candidates in the Field and to identify, optimize and develop modulators of Targets. It is intended that the Research Program will be conducted as a unified, collaborative effort with the Parties' activities carried out primarily at each Party's respective facilities. The Research Program shall be comprised of the Research Plan, a Target Validation Plan, approved by the JSC pursuant to Section 2.5.2, for each Target, and/or a Target Drug Discovery Plan, approved by the JSC pursuant to Section 2.5.2, for each Target. The Parties may amend the Research Plan by mutual written agreement. In the event of a conflict between the terms of this Agreement and the Research Plan, the terms of this Agreement shall govern.

2.2 **Research Program Term.**

Except as otherwise provided herein, the term of the Research Program shall commence on the Effective Date and continue for an initial period of [†] years. The Parties may extend the term of the

Research Program on a year-by-year basis, by mutual written agreement of authorized representatives of each Party, initially at least [†] days prior to the [†] anniversary of the Effective Date and, thereafter, at least [†] days prior to each subsequent anniversary of the Effective Date, and shall, in such case, amend any exhibits as necessary.

2.3 **Conduct of Research.**

2.3.1 Each Party shall use its Commercially Reasonable Efforts to perform its obligations pursuant to the Research Program and, without limitation, each Party shall perform the work set out in the Research Program by using its good faith efforts to allocate sufficient time, effort, equipment and facilities to the Research Program and to use personnel with sufficient skills and experience as are required to accomplish the objectives of the Research Program.

2.3.2 Each Party shall conduct the Research Program in compliance with all applicable laws, rules and regulations, including, without limitation, Good Laboratory Practice. In addition, if animals are used in research hereunder, the Parties shall comply with the United States Animal Welfare Act or any other applicable local, state, national and international laws and regulations relating to the care and use of laboratory animals. Each Party encourages the other Party to use the highest standards, such as those set forth in the Guide for the Care and Use of Laboratory Animals (NRC, 1996), for the humane handling, care and treatment of such research animals. Any animals which are used in the course of the Research Program, or products derived from those animals, such as eggs or milk, shall not be used for food purposes, nor shall these animals be used for commercial breeding purposes. Each Party shall notify the other Party in writing of any deviations from applicable regulatory or legal requirements.

2.3.3 Each Party hereby agrees that it shall not employ or otherwise use in any capacity, the services of any person debarred under United States law, including but not limited to Section 21 USC 335a, in performing any portion of the Research Program.

2.3.4 Merck shall be entitled to utilize the services of its Affiliates and Third Parties to perform its Research Program activities. Xenon shall be entitled to utilize the services of Third Parties to perform its Research Program activities only with the prior written consent of the JSC or as specifically set forth in the applicable Target Validation Plan or Target Drug Discovery Plan. [†].

2.4 **Principal Scientists.**

The Parties shall each designate a principal scientist for the Research Program, and/or a principal scientist for a Target Validation Plan and Target Drug Discovery Plan, and all work assignments to be performed by Xenon and Merck shall be carried out under the direction and supervision of the respective principal scientists selected by the Parties. Each Party shall notify the other Party as soon as practicable upon the changing of a principal scientist.

2.5 **Research Program.**

2.5.1 Either Party may submit a human gene or protein (a "**Target Candidate**") in writing to the JSC for consideration by the JSC as the subject of a Target Validation Plan or Target Drug Discovery Plan, and shall include a proposed Target Product Profile. Each of the Parties shall disclose to the JSC such Information within the Party's Control relating to the Target Candidate that is necessary (as determined by the disclosing Party) to evaluate the Target Candidate, and shall cooperate with the JSC to review and analyze such Information and, if the Target Candidate is approved by the JSC for the purpose of a Target Validation Plan or if a Target Candidate is approved for a Target Drug Discovery Plan, jointly assist the JSC to develop the plan. All such Information disclosed by a Party to the JSC shall be considered confidential Information and shall be subject to the provisions of Article 5.

2.5.2 A Target Validation Plan or Target Drug Discovery Plan shall be based upon the Research Plan and may only be approved by the JSC [†].

2.5.3 The Parties agree that each Target Drug Discovery Plan will include [†] (collectively, the "**Target Product Profile**").

2.5.4 As part of its obligations under the Research Program, [†].

2.5.5 The JSC may elect to develop any number of Target Drug Discovery Plans during the Research Program Term; provided, however, that commencing upon the [†] anniversary [†] Merck and Xenon shall [†].

2.5.6 If a Party (the "**Rejecting Party**") rejects a Target Candidate proposed by the other Party (the "**Proposing Party**") pursuant to Section 2.5.1 [†].

2.6 **Ownership of Technology.**

2.6.1 Subject to the provisions of Section 2.6.2 and Section 3.1, the entire right, title and interest in:

(i) Xenon Technology shall be owned solely by Xenon;

(ii) Merck Technology shall be owned solely by Merck; and

(iii) Joint Research Program Technology shall be owned [†];

and, except as expressly set out in this Agreement, neither Party acquires any right, license or other interest in such technology owned by the other Party.

2.6.2 Notwithstanding the provisions of Section 2.6.1 and subject to Section 3.1, with regard to Compounds which: (1) [†]; (2) [†]; (3) [†] (4) [†] Xenon shall, without further act by either Party, have a perpetual (which for greater certainty, shall survive the expiration or termination of this Agreement), royalty-free, exclusive (even as to Merck) license in the Territory, under [†] to [†] and Xenon shall have no financial obligation, or other obligation, to Merck or to any of its Affiliates, arising from the exercise of such right.

2.6.3 [†]or more frequently if requested by Merck, Xenon shall promptly disclose in writing, to an in-house patent attorney of Merck, designated by Merck, the development, making, conception or reduction to practice of Xenon Research Program Technology and Joint Research Program Technology including, but not limited to, Inventions discovered or created and resulting from the Research Program. In addition, Xenon shall disclose such Xenon Research Program Technology and Joint Research Program Technology to Merck in writing at the next succeeding JSC meeting or more frequently if requested by Merck.

2.7 **Joint Steering Committee.**

Within [†] days after the Effective Date, the Parties shall establish a Joint Steering Committee ("**JSC**") to oversee the Research Program. The JSC shall be comprised [†] but in no event shall exceed [†] representatives of each Party. Each Party may change its representatives to the JSC from time-to-time in its sole discretion, effective upon notice to the other Party of such change. Each of the representatives shall have appropriate technical credentials, experience and knowledge, familiarity with the Research Program and appropriate decision-making authority. Additional representatives or consultants may from time-to-time, by mutual consent of the Parties, be invited to attend JSC meetings, subject to such representative's or consultant's written agreement to comply with the requirements of Section 5.1. Each Party shall bear its own expenses related to the attendance of such meetings by its representatives or consultants.

2.8 **Decision-Making.**

Decisions of the JSC shall be made unanimously by the members of the JSC. In the event that the JSC cannot or does not, after good faith efforts, reach agreement on an issue, then [†].

2.9 **JSC Responsibilities.**

The JSC shall oversee the Research Program and its responsibilities shall include, but not be limited to, the following functions:

(a) [†];

(b) Defining minimum quality standards of sequence criteria for sequence data prior to commencement of sequencing of Target Candidates by Xenon;

(c) Acceptance of sequencing data for Target Candidates;

(d) Developing and approving each Target Validation Plan and Target Drug Discovery Plan pursuant to the provisions of Section 2.5.2, including all Xenon Target Validation Criteria;

(e) Approving a Target Candidate proposed by a Party as the subject of a Target Validation Plan or Target Drug Discovery Plan;

(f) Review relevant data, consider and advise on any technical issues that arise, consider issues of priority, and review and advise on any budget matters relating to the Research Program or to any individual Target Validation Plan or Target Drug Discovery Plan;

(g) Reviewing progress of the Research Program, including Compound identification;

(h) Recommending modifications to the Research Program;

(i) [†];

(j) Making recommendations to Merck as to whether to terminate a Target Validation Plan or Target Drug Discovery Plan; and

(k) Performing such other tasks as are specifically set forth in this Agreement.

2.10 **Meetings.**

2.10.1 The JSC shall be chaired by a representative of Merck.

2.10.2 The JSC shall meet [†] in accordance with a schedule established by mutual written agreement of the Parties.

2.10.3 The JSC shall hold an initial meeting within [†] days following the Effective Date and shall thereafter meet in accordance with a schedule established by mutual written agreement of the Parties, but no less frequently than once per Calendar Quarter.

2.10.4 The JSC may meet by means of teleconference, videoconference or other similar communications equipment, but in any event shall meet in person at least [†] with the location for in-person meetings alternating between Xenon and Merck facilities.

2.11 **Records.**

Each Party shall maintain records, in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes, which shall fully and properly reflect all work done and results achieved in the performance of the Research Program.

2.12 **Copies and Inspection of Records.**

Merck shall have the right, during normal business hours and upon reasonable notice, to inspect and copy all such records of Xenon referred to in Section 2.11. Xenon shall maintain such records and the information disclosed therein in confidence in accordance with Section 5.1. Merck shall have the right to arrange for its employee(s) and/or consultant(s) involved in the activities contemplated hereunder to visit the offices and laboratories of Xenon and any of its Third Party contractors as permitted under Section 2.3.4 during normal business hours and upon reasonable notice, and to discuss the Research Program work and its results in detail with the technical personnel and consultant(s) of Xenon. Upon request, Xenon shall provide to Merck copies of the records described in Section 2.11.

2.13 **Quarterly Reports.**

Within [†] days following the end of each Calendar Quarter during the Research Program Term, Xenon shall provide to the JSC a written progress report which shall describe, in reasonable detail, the work performed to date on the Research Program, evaluate the work performed in relation to the goals of the Research Program and the individual Target Validation Plans and Target Drug Discovery Plans, and provide such other information required by the Research Program or reasonably requested by the JSC or Merck.

2.14 **Annual Report.**

Until the expiration of the Research Program Term, on the annual anniversary of the Effective Date (and at the expiration of the Research Program Term), Xenon shall prepare, on a Target-by-Target basis, and provide to Merck: (1) an annual report, written in reasonable detail, of material activities performed under the Research Program the previous year, and (2) plans, written in reasonable detail, for activities to be undertaken under the Research Program in the subsequent year.

ARTICLE 3 MERCK OPTION

3.1 **Merck Option.**

With regard to each Target, Xenon hereby grants to Merck an option, on a Target-by-Target basis, to acquire from Xenon:

(a) an exclusive (even as to Xenon), worldwide, royalty-bearing license under [†]; and

(b) [†];

to research, develop, make, have made, use, offer to sell, sell and/or import Compounds and Products that [†] the Target[†], subject to the terms of this Agreement.

3.2 **Exercise of Merck Option.**

Merck may exercise the Merck Option at any time, and from time-to-time, during the Merck Option Period by providing notice in writing to Xenon that specifies the Target, and upon receipt by Xenon of such notice Merck shall, without further act by either of the Parties, be granted the licenses set out in Section 3.1.

3.3 **Transfer by Xenon.**

As soon as practicable following Merck's exercise of the Merck Option for a Target, but in no event later than [†] days thereafter, [†] shall, within a reasonable period of time after exercise of the Merck Option, but in any event not longer than [†] days thereafter, transfer all Information on the Target to Merck so that Merck may proceed with research, development and Commercialization relating to the Target and to Compounds and Products relating to the Target including, but not limited to, [†] pursuant to the terms of this Agreement.

3.4 **Option Exercise Fee.**

If Merck elects to exercise the Merck Option, then Merck shall pay to Xenon an option exercise fee of Two Million Dollars ($2,000,000) (the "**Option Exercise Fee**") for each of the first [†] optioned Targets and there shall be no Option Exercise Fee for Targets optioned by Merck after the first [†] Targets. The Parties agree that: (1) there is no limit on the number of Targets which Merck may option, and (2) the total of all Option Exercise Fees paid by Merck to Xenon pursuant to this Agreement shall not, under any circumstances, exceed [†]. Merck shall pay the Option Exercise Fee to Xenon within thirty (30) days of Merck's exercise of the Merck Option for each of the first [†] optioned Targets.

3.5 **Xenon Option.**

If Merck exercises the Merck Option and develops Compounds or Products, then Xenon shall have an option, subject to Section 3.6, with regard to Compounds or Products that utilise or are derived from Xenon Research Program Technology or Joint Research Program Technology, on a Compound-by-Compound and Product-by-Product basis, to co-fund fifty percent (50%) of the combined development costs of (a) and (b) below for each Compound or Product for which it exercises such option (the "**Xenon Option**" and each Product, a "**Co-Funded Product**"):

(a) all Phase I Clinical Trials, until completion of the first Phase II Clinical Trial; and

(b) the cost of the first Phase II Clinical Trial.

Merck shall provide to Xenon a copy of each such Compound's or Product's first IND (or other equivalent regulatory filing) and summary clinical development plans, including estimated costs through the end of the first Phase II Clinical Trial. [†]Xenon shall have [†] days after receipt of such costs in which to inform Merck in writing if Xenon exercises the Xenon Option.

If Xenon exercises the Xenon Option, then Xenon shall pay to Merck, [†], fifty percent (50%) of [†] with payment due [†] days after the end of [†]. Each [†], the Parties shall reconcile any variance between actual costs and estimated costs. If the actual development costs exceed the estimated development costs by [†] percent ([†]%) or less, then Xenon shall remit to Merck fifty percent (50%) of such underpayment within forty-five (45) days of notice of such underpayment. If the actual development costs exceed the estimated development costs by more than [†]percent ([†]%), then Merck shall deduct Xenon's share of the underpayment in excess of [†]percent ([†]%) from future royalties payable to Xenon.

3.6 **Merck Research Program Technology.**

The Parties acknowledge and agree that Xenon shall not have an option to co-fund Compounds or Products that do not utilise or are not derived from Xenon Research Program Technology or Joint Research Program Technology, but Xenon shall be eligible to receive royalties and milestones as provided in Sections 6.3.2 and 6.4.1(a)(i) in respect of such Compounds and Products.

3.7 **Annual Report.**

Following exercise of the Merck Option, Merck shall prepare, on a Target-by-Target and Product-by-Product and Compound-by-Compound basis, a summary annual report for Xenon which will include a description, in reasonable detail, of material research, pre-clinical, clinical and Commercialization activities undertaken by Merck during the prior year and planned for the next year.

3.8 **Joint Development Committee.**

Following exercise of the Merck Option, if Xenon exercised the Xenon Option, the Parties shall establish a joint development committee ("**JDC**") for each Co-Funded Product under development, which committee shall be constituted and shall carry out its duties as follows:

3.8.1 The principal function of the JDC shall be to keep Xenon informed, in reasonable detail, of development activities relating to each Co-Funded Product until NDA Approval of such Co-Funded Product.

3.8.2 The JDC shall be comprised of [†]. Each Party may change its representatives to the JDC from time-to-time in its sole discretion, effective upon notice to the other Party of such change. Each of the representatives shall have appropriate technical credentials, experience and knowledge, familiarity with the development of the Compound or Product and appropriate decision-making authority. Additional representatives or consultants may from time-to-time, by mutual consent of the Parties, be invited to attend JDC meetings, subject to such representative's or consultant's written agreement to comply with the requirements of Section 5.1.

3.8.3 The JDC shall meet [†], with the first such meeting at the facilities of Merck and thereafter to alternate between the facilities of the Parties.

3.8.4 A representative of Merck shall chair each meeting.

3.9 **Co-Funded Products – Reversion Rights and Credited Payments.**

3.9.1 **Reversion Rights**. If, following the expiration of the Research Program Term and if Merck has exercised the Merck Option, [†].

3.9.2 **Credited Payments**. If the Research Program Term expires and Merck ceases clinical development activities, for [†], on a Co-Funded Product [†] then Merck shall credit Xenon with an amount equal to the co-funding amounts received by Merck from Xenon for such dropped Co-Funded Product. Merck shall apply such credited amount to [†].

3.10 **[†].**

3.10.1 [†].

3.10.2 [†].

3.10.3 [†].

3.10.4 [†].

3.10.5 [†].

3.10.6 [†].

3.10.7 [†].

3.11 **[†].**

[†]:

(a) [†]

(b) [†]

ARTICLE 4 LICENSE; EXCHANGE OF INFORMATION; DEVELOPMENT AND COMMERCIALIZATION

4.1 **License Grants.**

4.1.1 **License Grants from Xenon to Merck**.

(a) Xenon hereby grants to Merck a non-exclusive license in the Field and in the Territory under Xenon Background Technology solely to perform research pursuant to the Research Plan and/or the applicable Target Validation Plan or Target Drug Discovery Plan during the Research Program Term.

(b) Xenon hereby grants to Merck a co-exclusive license in the Field and in the Territory under Xenon Research Program Technology and Xenon's interest in Joint Research Program Technology solely to perform research pursuant to the Research Plan and/or the applicable Target Validation Plan or Target Drug Discovery Plan during the Research Program Term.

(c) Upon Merck's exercise of the Merck Option, Xenon hereby grants to Merck the licenses provided for in Section 3.1.

4.1.2 **License Grants from Merck to Xenon.**

(a) Merck hereby grants to Xenon a non-exclusive license in the Field and in the Territory under Merck Background Technology solely to perform research pursuant to the Research Plan and/or the applicable Target Validation Plan or Target Drug Discovery Plan during the Research Program Term.

(b) Merck hereby grants to Xenon a co-exclusive license in the Field and in the Territory under Merck Research Program Technology and Merck's interest in Joint Research Program Technology solely to perform research pursuant to the Research Plan and/or the applicable Target Validation Plan or Target Drug Discovery Plan during the Research Program Term.

4.1.3 **Joint Research Program Technology**. Subject to the Merck Option, upon the expiration of the Research Program Term, [†].

4.2 **Internal Research Purposes.**

During the term of this Agreement, [†] shall be entitled to use [†] for Internal Research Purposes.

4.3 **Exchange of Information.**

During the Research Program Term, Merck shall provide to Xenon, in English and in writing or in an electronic format, the Merck Background Technology for Xenon to undertake its activities described in the Research Program. During the term of this Agreement, Xenon shall provide to Merck, in English and in writing or in an electronic format, the Xenon Background Technology for Merck to undertake its activities described in the Research Program and for Merck to exercise its rights upon exercise of the Merck Option.

4.4 **No Implied Licenses.**

Except as specifically set forth in this Agreement, neither Party shall acquire any license or other intellectual property interest, by implication or otherwise, in any Information disclosed to it under this Agreement or under any patents or patent applications Controlled by the other Party or its Affiliates.

4.5 **Development and Commercialization.**

Upon Merck's exercise of the Merck Option in respect of a Target, Merck shall use Commercially Reasonable Efforts in the development and Commercialization of Compound(s) and Product(s) that modulate such optioned Target.

4.6 **Excused Performance.**

[†].

ARTICLE 5 CONFIDENTIALITY AND PUBLICATION

5.1 **Nondisclosure Obligation.**

All Information disclosed by one Party to the other Party hereunder shall be maintained in confidence by the receiving Party and shall not be disclosed to any Third Party or used for any purpose except as set forth herein without the prior written consent of the disclosing Party, except to the extent that such Information:

5.1.1 is known by the receiving Party at the time of its receipt, and not through a prior disclosure by the disclosing Party, as documented by the receiving Party's business records;

5.1.2 is in the public domain by use and/or publication before its receipt from the disclosing Party, or thereafter enters the public domain through no fault of the receiving Party;

5.1.3 is subsequently disclosed to the receiving Party by a Third Party who may lawfully do so and is not under an obligation of confidentiality to the other Party;

5.1.4 is developed by the receiving Party independently of Information received from the disclosing Party, as documented by the receiving Party's business records;

5.1.5 is disclosed to governmental or other regulatory agencies in order to obtain patents or to gain or maintain approval to conduct clinical trials or to market Compounds or Products, but such disclosure may be only to the extent reasonably necessary to obtain patents or authorizations;

5.1.6 is deemed necessary by either Party to be disclosed to Related Parties, agent(s), or other Third Parties (who are approved pursuant to Section 2.3.4) in connection with the performance of its obligations pursuant to this Agreement, on the condition that such Third Parties agree to be bound by confidentiality and non-use obligations that substantially are no less stringent than those confidentiality and non-use provisions contained in this Agreement; provided, however, that the term of confidentiality for such Third Parties shall be no less than ten (10) years; or

5.1.7 is deemed necessary by counsel to the receiving Party to be disclosed to such Party's attorneys, independent accountants or financial advisors for the sole purpose of enabling such attorneys, independent accountants or financial advisors to provide advice to the receiving Party, on the condition that such attorneys, independent accountants and financial advisors agree to be bound by the confidentiality and non-use obligations contained in this Agreement; provided, however, that the term of confidentiality for such attorneys, independent accountants and financial advisors shall be no less than ten (10) years.

Any combination of features or disclosures shall not be deemed to fall within the foregoing exclusions merely because individual features are published or available to the general public or in the rightful possession of the receiving Party unless the combination itself and principle of operation are published or available to the general public or in the rightful possession of the receiving Party.

If a Party is required by judicial or administrative process to disclose Information that is subject to the non-disclosure provisions of this Section 5.1 or Section 5.2, such Party shall promptly inform the other Party of the disclosure that is being sought in order to provide the other Party an opportunity to challenge or limit the disclosure obligations. Information that is disclosed by judicial or administrative process shall remain otherwise subject to the confidentiality and non-use provisions of this Section 5.1 and Section 5.2, and the Party disclosing Information pursuant to law or court order shall take all steps reasonably necessary, including without limitation obtaining an order of confidentiality, to ensure the continued confidential treatment of such Information.

5.2 **Publication.**

5.2.1 Subject to the provisions of Section 5.1 and 5.2.3, Merck shall have the right, as of the Effective Date to publish: (1) Merck Research Program Technology; (2) any Xenon Research Program Technology under which Merck acquires a license pursuant to the exercise of the Merck Option; and (3) [†].

5.2.2 Following the expiration or termination of the Research Program Term, but not before, and subject to the provisions of Section 5.1 and 5.2.3, Xenon shall have the right to publish: (1) Xenon Research Program Technology (excluding any Xenon Research Program Technology under which Merck acquires a license pursuant to the exercise of the Merck Option); and (2) [†].

5.2.3 Merck and Xenon each acknowledge the other Party's interest in publishing the results of its research in order to obtain recognition within the scientific community and to advance the state of scientific knowledge. Each Party also recognizes the mutual interest in obtaining valid patent protection and in protecting business interests and trade secret information. Consequently, except for disclosures permitted pursuant to Section 5.1, if either Party decides that public presentation or publication of Research Program Technology is desirable pursuant to Sections 5.2.1 or 5.2.2, either Party, its Affiliates, its employee(s) or consultant(s) wishing to make a publication or presentation shall deliver to the other Party a copy of the proposed written publication or an outline of an oral disclosure at least sixty (60) days prior to submission for publication or presentation. The reviewing Party shall have the right (a) to propose modifications to the publication or presentation for patent reasons, trade secret reasons or business reasons, or (b) to request a reasonable delay in publication or presentation in order to protect patentable information. If the reviewing Party requests a delay, the publishing Party shall delay submission or presentation for a period of ninety (90) days to enable patent applications protecting each Party's rights in such information to be filed in accordance with Article 8. Upon expiration of such ninety (90) days, the publishing Party shall be free to proceed with the publication or presentation. If the reviewing Party requests modifications to the publication or presentation, the publishing Party shall edit such publication to prevent disclosure of trade secret or proprietary business information prior to submission of the publication or presentation.

5.3 **Publicity/Use of Names.**

Upon execution of this Agreement by the Parties, each Party may issue a press release as set out in Exhibit 5.3. In addition, each Party may, in its public and confidential disclosures to Third Parties and after execution of this Agreement, refer to the name of the other Party and the information set out in Exhibit 5.3. Otherwise, except as permitted by Section 5.1, no disclosure of the existence, or the terms, of this Agreement may be made by either Party, and no Party shall use the name, trademark, trade name or logo of the other Party, its Affiliates or their respective employee(s) in any publicity, promotion, news release or disclosure relating to this Agreement or its subject matter, without the prior express written permission of the other Party, except as may be required by law.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

ARTICLE 6 PAYMENTS; ROYALTIES AND REPORTS

6.1 **Research Program Costs.**

Other than as provided in Section 6.2, each Party shall be responsible for the costs it incurs in carrying out its responsibilities under the Research Program.

6.2 **FTE Funding.**

For the duration of the initial [†] year Research Program Term, Merck shall fund, on a [†] basis (pro-rated for any period of less than [†] months at the beginning or end of the Research Program Term), in advance, a minimum of [†] FTEs of Xenon at the FTE Rate. The number of funded FTEs may be increased during the initial [†] year Research Program Term by mutual written consent of both Parties. For extensions to the Research Program Term beyond the initial [†] year term, the FTEs may be increased or decreased by mutual written consent of both Parties. After the initial [†] year Research Program Term, the FTE cost will be adjusted in accordance with the local consumer price index.

6.3 **Milestone Payments.**

Subject to the terms and conditions of this Agreement, Merck shall pay to Xenon the following milestone payments:

6.3.1 **[†] Milestones:**

(a) Delivery of [†] pursuant to Section 2.9(a):

Two Million Five Hundred Thousand Dollars ($2,500,000)

(b) Delivery of [†] pursuant to Section 2.9(a):

Two Million Five Hundred Thousand Dollars ($2,500,000)

6.3.2 **Compounds and Products for which Xenon has Not Exercised the Xenon Option** (i.e., Compounds and Products Which are Not Co-Funded Products):

(a) **Milestone #1:** Identification of first Lead Compound for a Target:

One Million Dollars ($1,000,000)

(b) **Milestone #2**: [†]:

[†] Dollars ($[†])

(c) **Milestone #3:** [†]:

[†] Dollars ($[†])

(d) **Milestone #4:** [†]:

[†] Dollars ($[†])

(e) **Milestone #5: [†]:**

[†] Dollars ($[†])

(f) **Milestone #6:** [†]:

[†] Dollars ($[†])

(g) **Milestone #7:** [†]:

[†] Dollars ($[†])

(h) **Milestone #8:** [†]:

[†] Dollars ($[†])

(i) **Milestone #9:** [†]:

[†] Dollars ($[†])

6.3.3 C**ompounds and Products for which Xenon has Exercised the Xenon Option** (i.e., Co-Funded Products):

(a) **Milestone #1:** [†]:

[†] Dollars ($[†])

(b) **Milestone #2:** [†]:

[†] Dollars ($[†])

(c) **Milestone #3:** [†]:

[†] Dollars ($[†])

(d) **Milestone #4:** [†]:

[†] Dollars ($[†])

(e) **Milestone #5:** [†]:

[†] Dollars ($[†])

(f) **Milestone #6:** [†]:

[†] Dollars ($[†])

(g) **Milestone #7:** [†]:

[†] Dollars ($[†])

(h) **Milestone #8:** [†]:

[†] Dollars ($[†])

(i) **Milestone #9:** [†]:

[†] Dollars ($[†])

6.3.4 **General Milestone Provisions.**

(a) Merck shall notify Xenon in writing within [†] days following the achievement of each Milestone, and shall make the corresponding Milestone payment within [†] days after the achievement of such Milestone.

(b) [†] Milestones as provided for in Section 6.3.1 are payable [†].

(c) Milestones as provided for under Section 6.3.2 and Section 6.3.3 are payable [†].

(d) Each milestone payment under Section 6.3.2 and Section 6.3.3 is payable [†].

(e) **[†].**

(f) **[†].**

6.4 **Royalties.**

6.4.1 **Royalties Payable By Merck.** Subject to the terms and conditions of this Agreement, Merck shall pay royalties to Xenon, [†].

(a) **Patent Royalties.**

(i) **Royalty Tiers for Products which are Not Co-Funded Products.** Merck shall pay Xenon royalties in an amount equal to the following percentage of Net Sales by Merck and its Related Parties[†]:

(A) **[†] percent ([†]%)** of Net Sales [†] ($[†]);

(B) **[†] percent ([†]%)** of Net Sales [†];

(C) [†] **percent** ([†]**%)** of Net Sales [†]; and

(D) [†] **percent** ([†]**%**) of Net Sales [†].

(ii) **Royalty Tiers for Co-Funded Products.** Merck shall pay Xenon royalties in an amount equal to the following percentage of Net Sales of Co-Funded Products by Merck or its Related Parties[†]:

(A) [†] **percent (**[†]**%)** of Net Sales [†]

(B) [†] **percent** ([†]**%**) of Net Sales [†]

(C) [†] **percent (**[†]**%)** of Net Sales [†]and

(D) [†] **percent (**[†]**%)** of Net Sales [†]

(iii) Royalties on each Product at the rates set forth in Section 6.4.1(a)(i) and (ii) above (the "**Patent Royalty Rate**") shall continue on a country-by-country basis until the expiration of the last-to-expire Valid Patent Claim Covering the Product (the "**Patent Royalty Term**").

(b) **Know-How Royalty.** Notwithstanding the provisions of Section 6.4.1(a), in countries where the sale of a Product by Merck or its Related Parties would not infringe a Valid Patent Claim, Merck shall pay royalty rates that shall be set at fifty percent (50%) of the applicable Patent Royalty Rate determined according to Section 6.4.1(a)(i) or (ii), as applicable (tier based on worldwide annual net sales) (the "**Know-How Royalty Rate**"). Such royalties shall be calculated after first calculating royalties under Section 6.4.1(a)(i) or (ii), as applicable. Such Know-How Royalty shall be payable for ten (10) years following the First Commercial Sale of such Product (the "**Know-How Royalty Term**").

(c) **Calculation of Royalties.** [†]**.**

(d) **General Royalty Provisions.**

(i) All royalties are subject to the following conditions:

(A) [†] shall be due with respect to [†];

(B) [†]shall be due upon the sale or other transfer [†];

(C) no royalties shall accrue on the sale or other disposition of a Compound or Product by Merck or its Related Parties for use in a Clinical Trial; and

(D) [†].

6.4.2 **Change in Sales Practices.** The Parties acknowledge that during the term of this Agreement, [†].

6.4.3 **Compulsory Licenses.** If a compulsory license is granted to a Third Party[†].

6.4.4 **Third Party Licenses.** In the event that one or more [†].

6.4.5 **Non-Monetary Consideration.** In the event that Merck or any of its Related Parties receives any non-monetary consideration in connection with the sale or other disposition for value of Compounds or Products, including barter or counter-trade (but excluding transactions described in Section 6.4.1(d)(i)(D)), the Net Sales of such Compound or Product shall be calculated [†].

6.5 **Reports; Payment of Royalty.**

During the term of this Agreement following the First Commercial Sale of a Product, Merck shall furnish to Xenon a [†]written report for [†]showing the Net Sales of all Products subject to royalty payments sold by Merck and its Related Parties in the Territory during the reporting period and the royalties payable under this Agreement. Reports shall be due on the [†]day following [†]. Royalties shown to have accrued by each royalty report shall be due and payable on the date such royalty report is due. Merck shall keep complete and accurate records in sufficient detail to enable the royalties payable hereunder to be determined.

6.6 **Audits.**

6.6.1 Upon the written request of Xenon and not more than once [†], Merck shall permit an independent certified public accounting firm of nationally recognized standing selected by Xenon and reasonably acceptable to Merck, at Xenon's expense, to have access during normal business hours to such of the records of Merck as may be reasonably necessary to verify the accuracy of the royalty reports hereunder for any [†] ending not more than [†] prior to the date of such request. The accounting firm shall disclose to Xenon only whether the royalty reports are correct or incorrect and the amount of any discrepancy. No other information shall be provided to Xenon.

6.6.2 If such accounting firm correctly identifies a discrepancy made during such period, the appropriate Party shall pay the other Party the amount of the discrepancy within [†] days of the date Xenon delivers to Merck such accounting firm's written report so correctly concluding, or as otherwise agreed upon by the Parties. The fees charged by such accounting firm shall be paid by [†].

6.6.3 Merck shall include in each sublicense granted by it pursuant to this Agreement a provision requiring the sublicensee to make reports to Merck, to keep and maintain records of sales made pursuant to such sublicense and to grant access to such records by Xenon's independent accountant to the same extent required of Merck under this Agreement.

6.6.4 Upon the expiration of [†]following[†], the calculation of royalties payable with respect to [†].

6.6.5 Xenon shall treat all financial information subject to review under this Section 6.6 or under any sublicense agreement in accordance with the confidentiality and non-use provisions of this Agreement, and shall cause its accounting firm to enter into an acceptable confidentiality agreement with Merck and/or its Related Parties obligating it to retain all such information in confidence pursuant to such confidentiality agreement.

6.7 **Payment Exchange Rate.**

All payments to be made by Merck to Xenon under this Agreement shall be made in United States dollars and may be paid by check made to the order of Xenon or bank wire transfer in immediately available funds to such bank account in the United States as may be designated in writing by Xenon from time-to-time. In the case of sales outside the United States, the rate of exchange to be used in computing the monthly amount of currency equivalent in United States dollars due Xenon shall be made at the monthly rate of exchange utilized by Merck in its worldwide accounting system, prevailing on the third to the last business day of the month preceding the month in which such sales are recorded by Merck.

6.8 **Income Tax Withholding.**

[†].

ARTICLE 7 REPRESENTATIONS AND WARRANTIES

7.1 **Representations and Warranties of Each Party.**

Each Party represents and warrants to the other Party that as of the Effective Date:

(a) it is duly-incorporated, validly existing and in good standing under the laws of the jurisdiction of its incorporation;

(b) it has the full right, power and authority to enter into this Agreement and to perform its obligations hereunder; and

(c) this Agreement has been duly-executed by it and is legally binding upon it, enforceable in accordance with its terms, and does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it.

7.2 **Xenon Representations and Warranties.**

Xenon represents and warrants to Merck that as of the Effective Date:

(a) [†];

(b) [†];

(c) [†];

(d) [†]; and

(e) Xenon has not received notice of any claims, judgments or settlements against or owed by Xenon, nor of any pending or threatened claims or litigation, relating to the Xenon Patent Rights or Xenon Know-How.

7.3 **Merck Representations and Warranties.**

Merck represents and warrants to Xenon that as of the Effective Date:

(a) [†];

(b) [†];

(c) [†]; and

(d) Merck has not received notice of any claims, judgments or settlements against or owed by Merck nor of pending or threatened claims or litigation relating to the Merck Patent Rights or Merck Know-How.

7.4 **Covenants.**

7.4.1 [†].

7.4.2 [†].

7.4.3 [†].

7.4.4 [†].

7.4.5 [†].

7.5 **Disclaimer of Warranties.**

The warranties expressly provided in this Agreement are the sole warranties given by the Parties hereunder, and are made expressly in lieu of, and exclude, any implied warranties of merchantability, fitness for a particular purpose, non-infringement or otherwise, and all other express or implied representations and warranties provided by common law, statute or otherwise are hereby disclaimed by both Parties.

7.6 **Limitation of Liability.**

[†]; provided, however, the foregoing limitation of liability shall not apply to the liabilities arising from: (a) fraud or fraudulent misrepresentation of a Party or its Affiliate, or (b) the gross negligence or wilful misconduct of a Party or its Affiliate. Furthermore, this Section 7.6 shall not be construed to limit either Party's indemnification obligations under Section 7.7 or a Party's right to obtain such damages for a breach of Article 5.

7.7 **Indemnification.**

7.7.1 **Indemnification By Merck.** Merck shall indemnify, defend and hold Xenon, its Affiliates and its and their respective agents, employees, officers and directors (each a "**Xenon Indemnitee**") harmless from and against any and all claims, suits, actions, demands, liabilities, expenses and/or loss, including reasonable legal expense and attorneys' fees (collectively, "**Losses**") to which any Xenon Indemnitee may become subject as a result of any claim, demand, action or other proceeding by any Person other than a Party or its Affiliates to the extent such Losses arise out of: (a) Merck's, its Related Parties' or subcontractors' performance of Merck's obligations under this Agreement; (b) the manufacture, use, handling, storage, sale or other disposition of Compounds or Products by Merck and its Related Parties, only to the extent such manufacture, use, handling, storage, sale or other disposition activities (or any component thereof by Xenon for Merck) are not performed by, or on behalf of, Xenon and/or its Affiliates; (c) the use by a Third Party of any Compound or Product sold by or otherwise provided by Merck or its Related Parties; or (d) a material breach by Merck or its Related Parties of any covenant, representation, warranty or other Agreement made by Merck in this Agreement; except, in each case, to the extent such Losses result from the material breach by Xenon, its Affiliates, sublicensees or subcontractors of any covenant, representation, warranty or other agreement made by Xenon in this Agreement or the negligence or wilful misconduct of any Xenon Indemnitee.

7.7.2 **Indemnification by Xenon.** Xenon shall indemnify, defend and hold Merck, its Affiliates, Related Parties and its and their respective agents, employees, officers and directors (each a "**Merck Indemnitee**") harmless from and against any and all Losses, to which any Merck Indemnitee may become subject as a result of any claim, demand, action or other proceeding by any Person other than a Party or its Affiliates to the extent such Losses arise out of: (a) Xenon's, its Affiliates', sublicensees' or subcontractors' performance of Xenon's obligations under this Agreement; (b) the manufacture, use, handling, storage, sale or other disposition of Compounds or Products by, or on behalf or, Xenon and/or its Affiliates, including the use of Compounds or Products in connection with Clinical Trials; (c) the use by a Third Party of any Compound or Product sold by or otherwise provided by Xenon, its Affiliates, its sublicensees or subcontractors; or (d) a material breach by Xenon, its Affiliates, sublicensees or subcontractors of any covenant, representation or warranty or other agreement made by Xenon in this Agreement; except, in each case, to the extent such Losses result from the material breach by Merck, its Related Party or subcontractors of any covenant, representation, warranty or other agreement made by Merck in this Agreement or the negligence or wilful misconduct of any Merck Indemnitee.

7.7.3 **Notice of Indemnification Obligation and Defense**. Any Party entitled to indemnification under Section 7.7.1 or 7.7.2 shall give notice to the indemnifying Party of any Losses that may be subject to indemnification, promptly after learning of such Losses, but the omission to so notify the indemnifying Party promptly will not relieve the indemnifying Party from any liability under Section 7.7.1 or 7.7.2 except to the extent that the indemnifying Party shall have been prejudiced as a result of the failure or delay in providing such notice. The indemnifying Party shall assume the defense of such Losses with counsel reasonably satisfactory to the indemnified Party. If such defense is assumed by the indemnifying Party, the indemnifying Party will not be subject to any liability for any settlement of such Losses made by the indemnified Party without its consent (but such consent will not be unreasonably withheld or delayed), and will not be obligated to pay the fees and expenses of any separate counsel retained by the indemnified Party with respect to such Losses. The indemnified Party shall provide the indemnifying Party with all information in its possession and all assistance reasonably necessary to enable the indemnifying Party to carry on the defense of any such Losses.

7.8 **Insurance.**

7.8.1 **Xenon's Insurance Obligations.** During the term of this Agreement, Xenon shall maintain, at its cost, adequate insurance against liability and other risks associated with its activities contemplated by this Agreement, including but not limited to its indemnification obligations herein, in such amounts and on such terms as are customary for prudent practices in the pharmaceutical industry for the activities to be conducted by it under this Agreement. Xenon shall furnish to Merck evidence of such insurance upon request by Merck.

7.8.2 **Merck's Insurance Obligations.** Merck hereby represents and warrants to Xenon that it is self-insured against liability and other risks associated with its activities and obligations under this Agreement in such amounts and on such terms as are customary for a company in the pharmaceutical industry.

ARTICLE 8 PATENT PROVISIONS

8.1 **Filing, Prosecution and Maintenance of Patent Rights During the Research Program Term.**

8.1.1 During the Research Program Term:

(a) Merck shall be responsible for, and shall bear the cost of, the preparation, filing, prosecution and maintenance, in its sole discretion, of:

(i) the Merck Patent Rights; and

(ii) all Patent Rights Covering Merck Research Program Technology.

(b) Subject to the provisions of Sections 8.1.1(c) and (d) and Section 8.2.1, Xenon shall be responsible for the preparation, filing, prosecution and maintenance, of:

(i) the Xenon Patent Rights;

(ii) all Patent Rights Covering Xenon Research Program Technology; and

(iii) all Patent Rights Covering Joint Research Program Technology.

(c) With respect to the preparation, filing, prosecution and maintenance of the Patent Rights set out in Section 8.1.1(b) ("**Xenon Patent Prosecution**"):

(i) Xenon shall consult from time-to-time with Merck with respect to its choice of patent counsel;

(ii) Xenon shall provide to Merck, as often as reasonably requested, written reports listing the jurisdictions for Xenon Patent Prosecution and summarizing Xenon Patent Prosecution activities;

(iii) Xenon shall provide to Merck, for its review and comment, drafts of all patent applications, and all other material correspondence, submissions and documents, relating to Joint Patent Rights; and

(iv) Xenon shall bear the costs in respect of the Xenon Patent Rights and the Parties shall share equally the costs in respect of the Patent Rights Covering Xenon Research Program Technology and the Patent Rights Covering Joint Research Program Technology.

(d) [†].

(e) [†].

8.2 **Exercise of the Merck Option.**

8.2.1 On each occasion on which Merck exercises the Merck Option, but subject to the provisions of Section 8.2.3, Merck shall thereafter have the sole right, and the obligation, at its cost, to prepare, file, prosecute and maintain, throughout the Territory, all Patent Rights Covering the Xenon Research Program Technology and Joint Research Program Technology, in each case that is the subject of the license granted to Merck pursuant to Section 3.1.

8.2.2 With respect to the preparation, filing, prosecution and maintenance of the Patent Rights set out in Section 8.2.1 ("**Merck Patent Prosecution**"), Merck shall:

(i) consult from time-to-time with Xenon with respect to its choice of patent counsel; and

(ii) provide to Xenon, so often as reasonably requested, written reports listing the jurisdictions for Merck Patent Prosecution and summarizing Merck Patent Prosecution activities.

8.2.3 Merck shall not cease the prosecution or maintenance of any Patent Rights set out in Section 8.2.1, without first [†].

8.2.4 In the event that [†].

8.3 **Filing, Prosecution and Maintenance of Patent Rights Following Expiration of the Research Program Term.**

8.3.1 Following the expiration of the Research Program Term:

(a) Merck and Xenon shall have the right, each in its sole discretion and at its own cost, to prepare, file, prosecute and maintain, respectively, the Merck Patent Rights and the Xenon Patent Rights.

(b) Merck shall have the right, in its sole discretion, and at its cost, to prepare, file, prosecute and maintain all Patent Rights Covering Merck Research Program Technology.

(c) Subject to the provisions of Section 8.2.1, Xenon shall have the right, in its sole discretion, and at its cost, to prepare, file, prosecute and maintain:

(i) [†]; and

(ii) subject to the provisions of [†].

(d) [†].

(e) [†].

8.4 **Enforcement and Defense.**

8.4.1 **Enforcement and Defense Relating to Xenon Patent Rights or Xenon Know-How.**

(a) During the Research Program Term:

(i) each Party shall give to the other notice of any infringement of any Patent Rights Covering Joint Research Program Technology or the misuse or misappropriation of Joint Know-How that comes to such Party's attention;

(ii) Xenon shall give Merck notice of (A) any infringement of [†];

(iii) [†];

(iv) Xenon, upon notice to Merck, shall have the first right to initiate and prosecute such legal action in its own name or in the name of Xenon and Merck, or to control the defense of any declaratory judgment action relating to any such Patent Rights;

(v) Xenon shall promptly inform Merck if it elects not to exercise such first right and Merck shall thereafter have the right to either initiate and prosecute such action or to control the defense of such declaratory judgment action in the name of Merck and, if necessary, Xenon;

(vi) the costs of any such actions [†]; and

(vii) each Party shall have the right to be represented by counsel of its own choice.

(b) Following the expiration of the Research Program Term:

(i) Each Party shall give to the other notice of:

(A) any infringement of any Patent Rights Covering Joint Research Program Technology;

(B) misuse or misappropriation of Joint Know-How; and

(C) in the event that Merck has exercised the Merck Option, any infringement of any Patent Rights Covering the Xenon Research Program Technology that is the subject of the license granted pursuant to Section 3.1.

(ii) [†];

(iii) [†];

(iv) [†]; and

(v) each Party shall have the right to be represented by counsel of its own choice, at its cost.

(c) For any action contemplated in this Section 8.4.1, in the event that either Party is unable to initiate or prosecute such action solely in its own name, the other Party shall join such action voluntarily and shall execute and cause its Affiliates to execute all documents necessary to initiate litigation to prosecute and maintain such action. In connection with any action, each Party shall cooperate fully and shall provide each other with any information or assistance that either may reasonably request. Each Party shall keep the other informed of developments in any action or proceeding, including, to the extent permissible by law, consultation on and approval of any settlement, the status of any settlement negotiations and the terms of any offer related thereto.

(d) Any recovery obtained by either or both Merck and Xenon in connection with or as a result of any action contemplated by this Section, whether by settlement or otherwise, shall be shared in order as follows:

(i) [†];

(ii) [†]; and

(iii) [†].

(e) Xenon shall inform Merck of any certification regarding any Xenon Patent Rights it has received pursuant to either 21 U.S.C. §§355(b)(2)(A)(iv) or (j)(2)(A)(vii)(IV) or its successor provisions [†]provided, however, that [†].

8.5 **Cooperation; Patent Term Restoration; Pediatric Study Extensions.**

The Parties agree to cooperate and to take reasonable actions to maximize the protections available under the safe harbor provisions of 35 U.S.C. 103(c) for U.S. patents and patent applications. The Parties shall cooperate with each other, including, without limitation, to provide necessary information and assistance as the other Party may reasonably request, in obtaining patent term restoration or supplemental protection certificates or their equivalents, or pediatric study extensions, in any country in the Territory where applicable to Xenon Patent Rights, Xenon Research Program Technology, Merck Patent Rights, Merck Research Program Technology and/or Joint Patent Rights.

8.6 **Inventorship.**

Inventorship of all patent applications filed under this Agreement shall be determined in accordance with U.S. patent law.

ARTICLE 9 TERM AND TERMINATION

9.1 **Term and Expiration.**

9.1.1 This Agreement shall be effective as of the Effective Date and, unless terminated earlier pursuant to Sections 9.2 or 9.3, this Agreement shall continue in full force and effect until the expiration of all royalty obligations hereunder.

9.1.2 In the event that Merck has exercised the Merck Option, upon expiration of this Agreement the license granted to Merck pursuant to Section 3.1(a) shall thereupon become a fully paid-up, non-exclusive license, and each Party shall have the right, both in and outside of the Field, under Joint Research Program Technology, with a right to grant licenses under their respective interests in Joint Research Program Technology, to [†], and shall have no financial obligation to the other Party, or other obligation to account to the other Party, arising from the exercise of such right.

9.1.3 In the event that Merck has not exercised the Merck Option, upon expiration of this Agreement, [†], and shall have no financial obligation to the other Party, or other obligation to account to the other Party, arising from the exercise of such right.

9.2 **Termination By Merck.**

9.2.1 Notwithstanding anything contained herein to the contrary, Merck shall have the right to terminate this Agreement, in its sole discretion, by giving notice in writing (a "**Termination Notice**") to Xenon at any time following[†], specifying the effective date of such termination (the "**Termination Date**") and, except for the surviving provisions set forth in Section 9.4 and subject to the following provisions of this Section 9.2, all of the rights and obligations of the Parties hereunder shall terminate as of the Termination Date:

(a) [†];

(b) [†];

(c) Each Party shall have the right to fully use and exploit its interest in all Joint Research Program Technology both in and outside of the Field, without limitation, and to grant licenses under its interest in Joint Research Program Technology, all without any obligation to account to the other Party for any consideration received by such Party from the exercise of such right;

(d) The Parties shall continue to prosecute, maintain, enforce, and bear the costs of, all Patent Rights Covering Joint Research Program Technology in accordance with the provisions of Article 8;

(e) [†];

(f) [†]; and

(g) No later than thirty (30) days after the Termination Date, each Party shall return or cause to be returned to the other Party all Information in tangible form received from the other Party and all copies thereof; provided, however, that each Party may retain any Information reasonably necessary for such Party's continued practice under any license(s) which do not terminate pursuant to this Section, and may keep one copy of Information received from the other Party in its confidential files for record purposes.

9.3 **Termination for Cause.**

9.3.1 **Cause for Termination**. This Agreement may be terminated at any time during the term of this Agreement:

(a) upon written notice by either Party if the other Party is in breach of its material obligations hereunder by causes and reasons within its control and has not cured such breach within ninety (90) days after notice requesting cure of the breach; provided, however, in the event of a good faith dispute with respect to the existence of a material breach, the ninety (90) day cure period shall be tolled until such time as the dispute is resolved pursuant to Section 10.6; or

(b) by either Party upon the filing or institution of bankruptcy, reorganization, liquidation or receivership proceedings, or upon an assignment of a substantial portion of the assets for the benefit of creditors by the other Party; provided, however, that in the case of any involuntary bankruptcy proceeding such right to terminate shall only become effective if the Party consents to the involuntary bankruptcy or such proceeding is not dismissed within [†] days after the filing thereof.

9.3.2 **Effect of Termination for Cause on License.**

(a) If Merck terminates this Agreement under Section 9.3.1(a), then Merck's licenses pursuant to Sections 4.1.1 and 4.1.3 shall become fully paid-up, perpetual licenses, Xenon's licenses pursuant to Sections 4.1.2 and 4.1.3 shall terminate as of such termination date and Xenon shall, within thirty (30) days after the effective date of such termination return or cause to be returned to Merck all Products, Compounds, all Information in tangible form, and all substances or compositions delivered or provided by Merck, as well as any other material provided by Merck in any medium. If Xenon terminates this Agreement under Section 9.3.1(a), then Merck's licenses pursuant to Sections 4.1.1 and 4.1.3 shall terminate as of such termination date and Merck shall, within thirty (30) days after the effective date of such termination, return or cause to be returned to Xenon all Information in tangible form and substances or compositions delivered or provided by Xenon, as well as any other material provided by Xenon in any medium.

(b) Upon termination of this Agreement by Merck pursuant to Section 9.2, or by Xenon pursuant to Section 9.3.1(a), Merck and its Affiliates, sublicensees and distributors shall be entitled, during the twelve (12) month period immediately following the effective date of termination, to finish any work-in-progress and to sell any Products or Compounds remaining in inventory, in accordance with the terms of this Agreement.

(c) In the event that this Agreement is terminated by Merck under Section 9.3.1(b), then, in addition to the provisions of Section 9.3.2(a), this Section 9.3.2(c) shall also apply. In the event that this Agreement is terminated due to the rejection of this Agreement by or on behalf of Xenon due to an Insolvency Event[†].

The foregoing provisions of Section 9.3.2(c) are without prejudice to any rights Merck may have arising under the Code or other applicable law.

9.4 **Effect of Expiration or Termination; Survival.**

Expiration or termination of this Agreement shall not relieve the Parties of any obligation accruing prior to such expiration or termination. Any expiration or termination of this Agreement shall be without prejudice to the rights of either Party against the other accrued or accruing under this Agreement prior to expiration or termination, including, without limitation, the obligation to pay royalties for Products or Compounds sold prior to such expiration or termination. The provisions of Article 5 shall survive the expiration or termination of this Agreement and shall continue in effect for

ten (10) years. The provisions of Articles 1, 7, and 9 (except Section 9.5), the provisions of Article 8 governing the prosecution and enforcement of Patent Rights Covering Joint Research Program Technology, and Sections 2.6.2, 7.6, 7.7.1, 10.3, 10.4 and 10.5 shall survive the expiration or termination of this Agreement.

9.5 [†]**.**

9.5.1 In the event that there is a Change of Control [†] shall provide written notice to [†] and:

(a) [†]; and

(b) [†] shall have the right, at [†] election at any time after such Change of Control, to implement some or all of the following revisions to this Agreement:

(i) [†];

(ii) [†];

(iii) [†];

(iv) [†]; and

(v) [†].

9.5.2 "**Change of Control**" of a Party means: (a) the sale of all or substantially all of the Party's assets or business relating to this Agreement; (b) a merger, amalgamation, reorganization or consolidation involving the Party in which the voting securities of such Party outstanding immediately prior thereto cease to represent at least fifty percent (50%) of the combined voting power of the surviving entity immediately after such merger, reorganization or consolidation; or (c) the acquisition by a Person, or group of Persons acting in concert, of more than fifty percent (50%) of the voting equity securities or management control of the Party.

ARTICLE 10 MISCELLANEOUS

10.1 **Force Majeure.**

Neither Party shall be held liable to the other Party nor be deemed to have defaulted under or breached this Agreement for failure or delay in performing any obligation under this Agreement to the extent such failure or delay is caused by or results from causes beyond the reasonable control of the affected Party, potentially including, but not limited to, embargoes, war, acts of war (whether war be declared or not), acts of terrorism, insurrections, riots, civil commotions, strikes, lockouts or other labor disturbances, fire, floods, or other acts of God, or acts, omissions or delays in acting by any governmental authority or the other Party. The affected Party shall notify the other Party of such force majeure circumstances as soon as reasonably practical, and shall promptly undertake all reasonable efforts necessary to cure such force majeure circumstances.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

10.2 **Assignment.**

Except as hereinafter provided in this Section 10.2, this Agreement shall not be assigned or otherwise transferred, in whole or in part, nor may any right or obligation hereunder be assigned or transferred, by either Party without the prior written consent of the other Party, provided, however, that:

10.2.1 Merck may assign this Agreement and its rights and obligations hereunder, without Xenon's consent:

(i) in whole or in part to any Affiliate of Merck, provided that Merck notifies Xenon in writing within a reasonable amount of time after such assignment; or

(ii) in whole or in part in connection with a Change of Control of Merck or any Affiliate of Merck, provided that Merck gives notice in writing to Xenon within twenty (20) business days following the completion of such event.

10.2.2 Xenon may assign this Agreement and its rights and obligations hereunder, without Merck's consent in whole or in part in connection with a Change of Control of Xenon, provided that Xenon gives notice in writing to Merck within ten (10) business days following the completion of such event.

10.2.3 Any attempt by either Party to assign this Agreement in a manner which is not in accordance with this Section 10.2 shall be null and void and of no effect. In addition, no assignment shall release any Party from responsibility for the performance of any accrued obligation of such Party hereunder. Furthermore, this Agreement shall be binding upon and enforceable against the successor to or any permitted assignees from either of the Parties hereto.

10.3 **Severability.**

If any one or more of the provisions contained in this Agreement is held invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby, unless the absence of the invalidated provision(s) adversely affects the substantive rights of the Parties. The Parties shall, in such an instance, use their best efforts to replace the invalid, illegal or unenforceable provision(s) with valid, legal and enforceable provision(s) which, insofar as practical, implement the purposes of this Agreement.

10.4 **Notices.**

All notices which are required or permitted hereunder shall be in writing and sufficient if delivered personally, sent by facsimile (and promptly confirmed by personal delivery, registered or certified mail or overnight courier), sent by nationally-recognized overnight courier or sent by registered or certified mail, postage prepaid, return receipt requested, addressed as follows:

if to Xenon, to:	Xenon Pharmaceuticals Inc. 3650 Gilmore Way Burnaby, British Columbia Canada V5G 4W8 Attention: President and Chief Executive Officer Facsimile No.: 604-484-3450 and Attention: General Counsel Facsimile No.: 604-484-3450
if to Merck, to:	Merck Sharp & Dohme Research Ltd. Chesney House 96 Pitts Bay Road Pembroke HM 08, Bermuda Attention: Wesley Toavs Facsimile No.: 441-294-1551
and:	Merck & Co., Inc. One Merck Drive P.O. Box 100, WS3A-65 Whitehouse Station, NJ 08889-0100 Attention: Office of Secretary Facsimile No.: (908)735-1246
and:	Merck & Co., Inc. One Merck Drive P.O. Box 100, WS2A-30 Whitehouse Station, NJ 08889-0100 Attention: Chief Licensing Officer Facsimile No.: (908)735-1214

or to such other address(es) as the Party to whom notice is to be given may have furnished to the other Party in writing in accordance herewith. Any such notice shall be deemed to have been given: (a) when delivered if personally delivered or sent by facsimile on a business day (or if delivered or sent on a non-business day, then on the next business day); (b) on the business day after dispatch if sent by nationally-recognized overnight courier; or (c) on the fifth (5th) business day following the date of mailing, if sent by mail.

10.5 **Applicable Law.**

This Agreement shall be governed by and construed in accordance with the laws of [†] without reference to any rules of conflict of laws or renvoi.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

10.6 **Dispute Resolution.**

10.6.1 The Parties shall negotiate in good faith and use reasonable efforts to settle any dispute, controversy or claim arising from or related to this Agreement or the breach thereof. If the Parties do not fully settle, and a Party wishes to pursue the matter, each such dispute, controversy or claim that is not an "Excluded Claim" (as defined below) shall be finally resolved by binding arbitration in accordance with the Commercial Arbitration Rules and Supplementary Procedures for Large Complex Disputes of the American Arbitration Association ("**AAA**"), and judgment on the arbitration award may be entered in any court having jurisdiction thereof.

10.6.2 The arbitration shall be conducted by a panel of three (3) persons experienced in the pharmaceutical business. Within thirty (30) days after initiation of arbitration, each Party shall select one person to act as arbitrator and the two Party-selected arbitrators shall select a third arbitrator within thirty (30) days of their appointment. If the arbitrators selected by the Parties are unable or fail to agree upon the third arbitrator, the third arbitrator shall be appointed by the AAA. The place of arbitration shall be [†], and all proceedings and communications shall be in English.

10.6.3 Either Party may apply to the arbitrators for interim injunctive relief until the arbitration award is rendered or the controversy is otherwise resolved. Either Party also may, without waiving any remedy under this Agreement, seek from any court having jurisdiction any injunctive or provisional relief necessary to protect the rights or property of that Party pending the arbitration award. The arbitrators shall have no authority to award punitive or any other type of damages not measured by a Party's compensatory damages. [†].

10.6.4 Except to the extent necessary to confirm an award or as may be required by law, neither a Party nor an arbitrator may disclose the existence, content, or results of an arbitration without the prior written consent of both Parties. In no event shall an arbitration be initiated after the date when commencement of a legal or equitable proceeding based on the dispute, controversy or claim would be barred by the applicable [†] statute of limitations.

10.6.5 The Parties agree that, in the event of a dispute over the nature or quality of performance under this Agreement, neither Party may terminate this Agreement until final resolution of the dispute through arbitration or other judicial determination. The Parties further agree that any payments made pursuant to this Agreement pending resolution of the dispute shall be refunded if an arbitrator or court determines that such payments are not due.

10.6.6 As used in this Section, the term "**Excluded Claim**" means a dispute, controversy or claim that concerns [†].

10.6.7 In the event that any matter involving the determination of any amounts due to either Party pursuant to the audit process set out in Section 6.6 has not been resolved pursuant to the procedures set out in Section 10.6.1, then the Parties shall (i) use reasonable efforts to reach agreement on the appointment of one (1) internationally-recognized independent accounting firm to determine the matter, (ii) if the Parties cannot reach agreement on such accounting firm within [†] business days, then each Party shall appoint one (1) internationally-

recognized accounting firm to determine the matter, and (iii) if such firms cannot reach agreement within [†] business days from their appointment, such firms shall choose a third internationally-recognized independent accounting firm who shall make the final determination as promptly as possible, which determination shall be final and binding on the Parties.

10.7 **Entire Agreement; Amendments.**

This Agreement, together with the Schedules and Exhibits hereto, contains the entire understanding of the Parties with respect to the subject matter hereof. Any other express or implied agreements and understandings, negotiations, writings and commitments, either oral or written, in respect to the subject matter hereof are superseded by the terms of this Agreement. The Schedules and Exhibits to this Agreement are incorporated herein by reference and shall be deemed a part of this Agreement. This Agreement may be amended, or any term hereof modified, only by a written instrument duly-executed by authorized representative(s) of both Parties hereto.

10.8 **Headings.**

The captions to the several Articles, Sections and subsections hereof are not a part of this Agreement, but are merely for convenience to assist in locating and reading the several Articles and Sections hereof.

10.9 **Independent Contractors.**

It is expressly agreed that Xenon and Merck shall be independent contractors and that the relationship between the two Parties shall not constitute a partnership, joint venture or agency. Neither Xenon nor Merck shall have the authority to make any statements, representations or commitments of any kind, or to take any action, which shall be binding on the other Party, without the prior written consent of the other Party.

10.10 **Waiver.**

The waiver by either Party hereto of any right hereunder, or of any failure of the other Party to perform, or of any breach by the other Party, shall not be deemed a waiver of any other right hereunder or of any other breach by or failure of such other Party whether of a similar nature or otherwise.

10.11 **Cumulative Remedies.**

No remedy referred to in this Agreement is intended to be exclusive, but each shall be cumulative and in addition to any other remedy referred to in this Agreement or otherwise available under law.

10.12 **Waiver of Rule of Construction.**

Each Party has had the opportunity to consult with counsel in connection with the review, drafting and negotiation of this Agreement. Accordingly, the rule of construction that any ambiguity in this Agreement shall be construed against the drafting Party shall not apply.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

10.13 **Certain Conventions.**

Any reference in this Agreement to an Article, Section, subsection, paragraph, clause, Schedule or Exhibit shall be deemed to be a reference to an Article, Section, subsection, paragraph, clause, Schedule or Exhibit, of or to, as the case may be, this Agreement, unless otherwise indicated. Unless the context of this Agreement otherwise requires, (a) words of any gender include each other gender, (b) words such as "**herein**", "**hereof**", and "**hereunder**" refer to this Agreement as a whole and not merely to the particular provision in which such words appear, (c) words using the singular shall include the plural, and vice versa.

10.14 **Business Day Requirements.**

In the event that any notice or other action or omission is required to be taken by a Party under this Agreement on a day that is not a business day, then such notice or other action or omission shall be deemed required to be taken on the next occurring business day.

10.15 **Counterparts.**

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

MERCK SHARP & DOHME RESEARCH LTD.	**XENON PHARMACEUTICALS INC.**
BY: /s/ Wesley Toavs	BY: /s/ Simon Pimstone
Wesley Toavs	**Simon N. Pimstone, MD, PhD, FRCPC**
TITLE: **Assistant Treasurer**	TITLE: **President & CEO**

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

EXECUTION VERSION

EXHIBIT 1.56

MERCK PATENT RIGHTS

41

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

EXHIBIT 1.78

RESEARCH PLAN

42

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

Xenon Pharmaceuticals Inc.

and

Research Plan

June 10, 2009

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

table of contents

[†] [Redaction continued for 14 pages]

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

EXECUTION VERSION

EXHIBIT 1.100

XENON PATENT RIGHTS

45

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

EXECUTION VERSION

EXHIBIT 1.102

XENON TARGET VALIDATION CRITERIA

46

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

Exhibit 5.3

PRESS RELEASE

FOR IMMEDIATE RELEASE

Vancouver, Canada, 11th June 2009

Xenon Enters Cardiovascular Disease Collaboration with Merck & Co., Inc.

Xenon today announced a strategic alliance with Merck & Co., Inc., through an affiliate, to discover and develop novel small molecule candidates for the potential treatment of cardiovascular disease.

“We are very excited to be collaborating with Merck to define new therapeutics in the area of cardiovascular diseases,” said Simon Pimstone, President and CEO of Xenon. “With this deal, Xenon is continuing its strategy of risk mitigation by select partnering, while retaining ownership of other programs.”

In collaboration with Merck, Xenon will perform validation studies using its clinical genetics platform, as well as drug discovery and select preclinical development of small molecule compounds for those targets selected by a joint steering committee.

Under the terms of the agreement, Merck has the option to exclusively license targets and compounds from Xenon for development and commercialization. In return, Xenon receives research funding and is eligible for option exercise fees, research, development and regulatory milestone payments of up to US$94.5 million for the first target and up to US$89.5 million for each subsequent target selected for drug discovery. In addition, Merck will pay Xenon undisclosed royalties on sales of products resulting from the collaboration. Xenon retains the right to develop and commercialize certain compounds for which Merck does not exercise its option.

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Michael Hayden, CSO of Xenon added: “We recognize that Merck is a leading pharmaceutical company with significant presence in and commitment to the cardiovascular space and they are an ideal strategic partner for Xenon. This new alliance, which represents our fifth partnership with a major pharmaceutical company, once again highlights Xenon’s R&D capabilities and validates our drug discovery platform.”

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About Xenon Pharmaceuticals Inc. (Xenon)

Xenon is a privately owned, clinical genetics-based drug discovery and development company engaged in developing small molecule therapies based on the genetic causes of select metabolic, neurological and cardiovascular diseases. For more information, visit the Company's website at http://www.xenon-pharma.com.

For more information regarding this press release, contact:

Dr. Robin Sherrington, Senior Director, Strategic Alliances (604) 484-3363 ddunn@xenon-pharma.com

This release contains forward-looking statements that are not based on historical fact. These forward-looking statements involve risks, uncertainties and other factors that may cause the actual results, events or developments to be materially different from those expressed or implied by such forward-looking statements. Readers are cautioned not to place undue reliance on such forward-looking statements.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

GUARANTEE

THIS GUARANTEE is made effective as of June 10, 2009

BETWEEN:

MERCK & CO., INC., a corporation organized and existing under the laws of New Jersey

("**Merck**")

AND

XENON PHARMACEUTICALS INC., a corporation organized and existing under the laws of Canada

("**Xenon**")

RECITALS

WHEREAS:

A. Xenon has entered into an Exclusive Collaborative Research and Option Agreement (the "**Agreement**") with Merck Sharp & Dohme Research Ltd. ("**Merck Research**"), a wholly-owned subsidiary of Merck, upon the condition that Merck guarantee the performance of the financial obligations of Merck Research under the Agreement.

B. Merck is prepared to guarantee the performance of the financial obligations of Merck Research under the Agreement upon the terms set out herein.

IN CONSIDERATION of Xenon entering into the Agreement with Merck Research, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Merck hereby unconditionally guarantees to Xenon the due and punctual performance by Merck Research of all financial obligations of Merck Research under the Agreement, and promises on demand to pay to the order of Xenon all indebtedness and liability of Merck Research under the Agreement, in the amounts, at the times and in the manner set forth in the Agreement. The following terms apply to this Guarantee:

(a) Merck hereby unconditionally, absolutely and irrevocably guarantees and covenants to Xenon the full performance, observance, satisfaction, and payment of, any and all payment obligations as and when due by Merck Research to Xenon under the Agreement (the "Guaranteed Obligations), provided that Merck Research has failed to make a payment when due under the Agreement and Xenon has provided a notice and demand for payment to Merck Research.

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(b) The liability of Merck pursuant to this Guarantee shall not be discharged, limited or released by any extensions of time for payment of any Guaranteed Obligations granted by Xenon to Merck Research.

(c) If any default shall be made in the performance, observance, satisfaction and payment of any of the Guaranteed Obligations, Merck covenants and agrees with Xenon to perform, observe, satisfy and pay to Xenon forthwith any and all of the Guaranteed Obligations in respect of which such default will have occurred.

(d) Until there has been full performance, observance, satisfaction and payment of all of the Guaranteed Obligations, the rights of Xenon and the obligations of Merck under this Guarantee shall remain in full force and effect without regard to, and shall not be released, discharged or in any way affected or impaired, terminated or prejudiced by, the dissolution, winding-up or other cessation of existence of Merck Research, the amalgamation of Merck Research with another corporation, the appointment of a custodian, liquidator, receiver or trustee in respect of the assets or undertaking, in whole or in part, of Merck Research, any arrangement, bankruptcy, composition, insolvency, liquidation, readjustment, receivership, reorganization or other similar proceeding or occurrence relating to Merck Research, or any assignment by Merck Research for the benefit of creditors.

(e) The foregoing guarantee shall be fully enforceable against Merck without Xenon first bringing legal process against or exhausting any remedy against Merck Research.

(f) Xenon may assign, grant, pledge or transfer its interest in this Guarantee or any of the guaranteed liabilities or any power, remedy or right of Xenon hereunder on the same terms upon which Xenon may assign its interest in the Agreement.

(g) No waiver on the part of Xenon to exercise, and no delay in exercising, any right hereunder will operate as a waiver of this Guarantee, nor will any single or partial exercise of any right hereunder preclude the other or further exercise thereof or the exercise of any other right. The remedies provided hereunder are not exclusive of any remedies provided at law.

(h) This Agreement shall be governed by and construed in accordance with the laws of the State of New York without reference to any rules of conflict of laws or renvoi.

(Signature page follows.)

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IN WITNESS WHEREOF the parties hereto have executed this Guarantee on the dates stated below.

MERCK & CO., INC.

/s/ Mervyn Turner
Per: Mervyn Turner
Chief Strategy Officer, Merck & Co., Inc. and Senior Vice President, Worldwide Licensing & External Research, Merck Research Laboratories

Date: June 10, 2009

XENON PHARMACEUTICALS INC.

/s/ Simon N. Pimstone
Per: Simon N. Pimstone, MD, PhD, FRCPC
President & CEO

Date: June 10, 2009

This is the Execution Page to Guarantee dated effective June 10, 2009.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

First Amendment to the
Exclusive Collaborative Research and Option Agreement between
Essex Chemie AG (formerly Merck Sharp & Dohme Research Ltd.) and
Xenon Pharmaceuticals Inc.

This First Amendment ("First Amendment") is made effective as of June 9, 2012 (the "First Amendment Effective Date") by and between Essex Chemie AG (formerly Merck Sharp & Dohme Research Ltd.) ("ECAG") and Xenon Pharmaceuticals Inc. ("Xenon") respecting that certain Exclusive Collaborative Research and Option Agreement between the Parties dated June 10, 2009 (the "Agreement").

WHEREAS, Xenon and ECAG entered into the Agreement for the purpose of carrying out certain collaborative research activities under the terms and conditions set forth in the Agreement which may result in Research Program Technology; and

WHEREAS, Xenon and ECAG now wish to amend the agreement to extend the Research Program Term and to modify the Research Plan, as set forth herein;

NOW, THEREFORE, in consideration of the foregoing and the mutual promises contained hereinafter, the sufficiency of which is hereby acknowledged, Xenon and ECAG hereby agree as follows:

1. All references to "Merck" in the Agreement shall be read and construed as references to "ECAG".

2. In Article 1, Definitions, the following definitions shall be deleted and replaced in their entirety as follows:

   1.25 "Field" means [†].

   1.78 "Research Plan" means the preclinical research plan attached to the Agreement as Exhibit 1.78, including any written modifications to same that were approved in writing by the JSC during the Research Program Term. Such modifications to the Research Plan include the eight (8) plans attached hereto as Exhibit 1.78 (including Exhibit 1.78A). The **"Research Plan"** includes the **"Extended Research Plan"** which is attached hereto as Exhibit 1.78A.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

The Research Plan provides, among other things, that the JSC may approve a Target Validation Plan or Target Drug Discovery Plan for each Target. The Research Plan during the Initial Research Program Term requires Xenon to [†]. In addition to modifications made by the JSC as provided above, the Parties may also amend the Research Plan by mutual written agreement. In the event of a conflict between the terms of the Agreement, as amended herein, and the Research Plan, the terms of the Agreement, as amended herein, shall govern.

1.81 **"Research Program Term"** means the combined duration of (i) the **"Initial Research Program Term"** and (ii) the **"Extended Research Program Term",** each as described in Section 2.2 as amended.

3. In Article 2, **Research Program,** the following Sections shall be amended as follows:

3.1 Section 2.1, **General,** shall be deleted and replaced m its entirety as follows:

"2.1 Xenon and ECAG shall conduct research activities pursuant to the provisions of this Agreement and the Research Program. Xenon shall perform studies to produce data with the goal of [†]. For clarity,

(i) during the Initial Research Program Term (as defined below), the Parties shall conduct the activities in the Field as described in the Research Plan set forth in Exhibit 1.78, including any written modifications to same that are approved in writing by the JSC; and

(ii) during the Extended Research Program Term, the Parties shall conduct solely the activities agreed to in the **"Extended Research Plan"** which is attached hereto as Exhibit **1.**78A, including any written modifications to same that are approved in writing by the JSC,

each of (i) and (ii) in accordance with the terms set out herein.

It is intended that the Research Program be conducted as a unified, collaborative effort with the Parties' activities carried out primarily at each Party's respective facilities. The Research Program shall be comprised of the Research Plan, one or more Target Validation Plans approved by the JSC pursuant to Section 2.5.2, and one or more Target Drug Discovery Plans approved by the JSC pursuant to Section 2.5.2. In addition to modifications approved by the JSC in writing as provided in this Section 2.1 above, the Parties may also amend the Research Plan by mutual written agreement. In the event of a conflict between the terms of the Agreement and the Research Plan, the terms of this Agreement, as amended herein, shall govern.

For avoidance of doubt, the Parties hereto confirm and agree that the Research Plan , including the Extended Research Plan, is an integral part of the Research Program for all purposes herein."

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3.2 Section 2.2, Research Program Term, shall be deleted and replaced in its entirety as follows:

"2.2 Except as otherwise provided herein, the term of the Research Program shall commence on the Effective Date of the Agreement and continue up to and including [†] (the "Initial Research Program Term"), and shall further continue during the period commencing on [†] and continue up to and including December 9, 2012 (the "Extended Research Program Term")."

3.3 Section 2.5.4 shall be deleted and replaced in its entirety as follows:

"2.5.4 As part of its obligations under the Research Program , [†]."

3.4 Section 2.5.6 shall be deleted and replaced in its entirety as follows :

"2.5.6 If a Party (the "Rejecting Party") rejects in writing a Target Candidate proposed by the other Party (the "Proposing Party") pursuant to Section 2.5.l [†]."

3.5 The Parties hereto confirm and agree that as of the First Amendment Effective Date: (i) [†]; and

(ii) no Target Candidates have been rejected under Section 2.5.6.

3.6 In Article 2, **Research Program,** a new section, Section 2.5.7, shall be added as follows:

"2.5.7 Notwithstanding anything to the contrary in the Agreement, the Parties agree that all Xenon Research Program Technology generated, developed or invented during the Research Program Term regarding [†] shall be deemed to be **"Joint Research Program Technology"."**

3.7 In Article 2, Section 2.9 (h) shall be deleted and replaced in its entirety as follows:

"(h) [†];"

4. In Article 4, **License Grants,** Section 4.1.3 shall be deleted and replaced in its entirety as follows:

"4.1.3 **Joint Research Program Technology.** Subject to the Merck Option, upon the expiration of the Research Program Term, [†]."

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5. In Article 6, Payments; Royalties and Reports, the following Section shall be amended as follows:

5.1 Section 6.2, FTE Funding, shall be deleted and replaced in its entirety as follows:

"6.2 For the duration of the Initial Research Program Term, ECAG shall fund, on a [†] basis (pro-rated for any period of less than [†] months at the beginning or end of the Initial Research Program Term), in advance, a minimum often [†] FTEs of Xenon, but no more than [†] FTEs of Xenon, as approved by the JSC in writing, at the FTE Rate.

For the duration of the Extended Research Program Term, Xenon shall undertake the work as provided in the Extended Research Plan, and: (i) ECAG shall fund, on a [†] basis (pro-rated for any period of less than [†] months at the beginning or end of the Extended Research Program Term), in advance, for the period of [†] through and including [†] FTEs of Xenon at the FTE Rate, and (ii) Xenon shall fund, for the period of [†] through and including [†], up to [†] FTEs of Xenon."

6. In Article 7, Representations and Warranties , a new section, Section 7.9, shall be added as follows:

"7.9 Compliance with Laws and Business Ethics. Xenon acknowledges that ECAG's corporate policy requires that ECAG's business must be conducted within the letter and spirit of the law. By signing this Agreement, and any associated amendments, each Party agrees to conduct the activities contemplated herein in a manner which is consistent with both law and good business ethics. Neither Party shall make any payment, either directly or indirectly, of money or other assets (collectively , "Payment") to government or political party officials, officials of international public organizations , candidates for public office, or representatives of other businesses or persons acting on behalf of any of the foregoing ("Officials") where such Payment would constitute a violation of any law. In addition, regardless of legality , neither Party shall make any Payment either directly or indirectly to Officials if such Payment is for the purpose of influencing decisions or actions with respect to the subject matter of this Agreement or any other aspect of the other Party's business. Each Party acknowledges that no employee of the other Party shall have authority to give any direction, either written or oral, relating to the making of any commitment by a Party or its agents to any Third Party in violation of terms of this provision."

7. In Article 9, Section 9.1.2 and Section 9.1.3, to the extent that each such Sections relate to the Parties' rights under Joint Research Program Technology, shall each be deemed to be amended to reflect the same rights under Joint Research Program Technology as provided under Section 4.1.3, as herein amended.

8. In Article 9, Change of Control, a new subsection, Section 9.5.l(c), shall be added as follows:

"9.5.1(c) In the event of a Change of Control of [†]."

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9. This First Amendment shall be read and interpreted as being additive to and in harmony with and not as replacing or contradicting the terms and conditions of the Agreement except to the extent modified by the terms and conditions of this First Amendment. All capitalized terms used and not otherwise defined in this First Amendment shall have the meanings set forth in the Agreement.

10. All other terms and conditions to the Agreement remain unchanged and in full force and effect except to the extent modified by the terms and conditions of this First Amendment.

11. The Agreement, as modified by this First Amendment, contains the entire understanding of the Parties with respect to the subject matter contemplated herein.

12. As of the First Amendment Effective Date, all terms contained in this First Amendment shall be in full force and effect; provided, however, that the modifications to Sections 1.25, 1.78 (solely with respect to the terms therein providing that written modifications to the Research Plan and/or Research Program be approved by the JSC in writing), 2.1 (solely with respect to the terms therein

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providing that written modifications to the Research Plan and/or Research Program be approved by the JSC in writing), 2.5.4, 2.5.6, 2.5.7 and 2.9(h) (solely with respect to the terms therein providing that written modifications to the Research Plan and/or Research Program be approved by the JSC in writing) of the Agreement as set forth above in this Amendment shall be effective as of the Effective Date.

IN WITNESS WHEREOF, the Parties have caused this First Amendment to be executed by their duly-authorized representatives, effective as set forth above.

Essex Chemie AG

BY: /s/ Christoph Brombacher
Christoph Brombacher

TITLE: Director

DATE: July 20, 2012

Xenon Pharmaceuticals Inc.

BY: /s/ KAREN G. CORRAINI
KAREN G. CORRAINI

TITLE: GENERAL COUNSEL & CORPORATE SECRETARY

DATE: 26 - July - 2012

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EXHIBIT 1.78

Research Plan

Research Plan dated November 24, 2009

[†] Target Drug Discovery Plan dated February 2, 2010

[†] Target Validation Plan dated March 16, 2011

[†] Target Drug Discovery Plan dated March 28, 2011

[†] [Redaction continues for 56 pages]

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EXHIBIT 1.78A

Extended Research Plan

[†] Target Validation Plan dated June 19, 2012

[†] Research Plan dated June 19, 2012

[†] Research Plan dated June 19, 2012

[†] Research Plan dated June 19, 2012

[†] [Redaction continues for 10 pages]

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Exhibit 10.2

SUBLICENSE AND RESEARCH AGREEMENT

This Agreement is made and entered into this 18th day of June, 2001 by and between **Xenon Genetics Inc.**, a corporation organized a d existing under the laws of Canada, with registered offices at Suite 100 - 2386 East Mall, Vancouver, BC, Canada V6T 1Z3 (hereinafter referred to as: "**Xenon**"), of the one part, and **Amsterdam Molecular Therapeutics B.V.**, a closed limited liability company organized and existing under the laws of the Netherlands, with registered offices at Meibergdreef 61, 1105 BA Amsterdam, the Netherlands, (hereinafter referred to as "**AMT**"), of the other part,

the parties (hereinafter also individually referred to as "**Party**" and collectively as "**Parties**");

WITNESSETH

WHEREAS AMT is conducting research and development programs in the area of gene therapy and has extensive research and development capabilities, including production facilities, to investigate and develop new therapeutics for use in the area of gene therapy;

WHEREAS, the University of British Columbia (hereinafter referred to as: "**UBC**") has expertise with respect to lipoprotein lipase (hereinafter referred to as "**LPL**") specifically in the area of diagnostics, animal models, clinical genetics and gene therapy, such research programs headed by Dr. Michael Hayden;

WHEREAS for many years, UBC and Academic Hospital at the University of Amsterdam ("**AMC**") have an ongoing research collaboration with respect to LPL, such programs headed by their respective principal researchers Dr. John Kastelein from AMC and Dr. Michael Hayden from UBC;

WHEREAS UBC and AMC wish to extend their scientific collaboration in the area of LPL gene therapy in humans including all research and development required for establishing a successful clinical LPL gene therapy protocol, with commercial aspects, for their mutual benefit;

WHEREAS AMT has expressed its interest in becoming responsible for the following: the total commercial operation, including development of the preclinical and clinical program,

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production of preclinical and clinical products, all current intellectual property rights of the Parties in the LPL gene therapy field, as well as improvements, variations, updates, modifications and enhancements to the existing intellectual property rights that will result from the joined activities of the Parties in this field;

WHEREAS AMC has granted an exclusive license to AMT with respect to its intellectual property rights in the area of LPL gene therapy in humans, including, *(pending receipt of the final approval of UBC, in accordance with the Letter of Intent between UBC and AMC in that regard*), all AMC's rights relating to UBC-Amsterdam Technology (as defined hereafter) of which invention Dr. Michael Hayden and Dr. Kastelein are the inventors, including PCT Application #CA00/00762, and all patents and patent applications accruing therefrom;

WHEREAS UBC owns the intellectual property, including patents related to the UBC Technology, as defined hereinafter, and also, jointly with [†], patents related to the UBC-[†] Technology, as defined hereinafter, and also, jointly with AMC, patents related to the UBC-Amsterdam Technology, as defined hereinafter;

WHEREAS on August 1, 2000 Xenon entered into a Collaborative Research Agreement with UBC, pursuant to which UBC shall perform research projects for Xenon by making use of the know how and information it has developed relating to the technologies described above;

WHEREAS on August 1, 2000, Xenon also entered into a License Agreement with UBC, pursuant to which UBC granted to Xenon an exclusive license to the UBC Technology and, *(pending receipt of the approvals from [†]and AMC, respectively*), pursuant to which UBC also granted to Xenon an exclusive license to its part of the UBC-[†] Technology, and to its part of the UBC-Amsterdam Technology, with the right to grant sublicenses;

WHEREAS AMT wishes to acquire and Xenon wishes to grant to AMT, a sublicense under the License Agreement on the terms and conditions set forth in this Agreement;

WHEREAS AMT and Xenon have already agreed that AMT shall sponsor the research Project as defined in the Collaborative Research Agreement between Xenon and UBC and, for that purpose, AMT and Xenon entered into Heads of Agreement effective August 1, 2000;

WHEREAS the Parties now desire to come to a definitive agreement and to replace the Heads of Agreement by this Sublicense and Research Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and promises set forth herein, and other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged the Parties hereby agree as follows:

ARTICLE 1 - DEFINITIONS

1.1 Plural used in this Agreement shall mean singular and vice versa.

1.2 When used in this Agreement, the following terms shall mean:

(a) "**Affiliate**" means any person, corporation, limited liability company, partnership or other legal entity, if any, which is controlled by a Party or which is under common control with a Party. Such entity shall be regarded as controlling another entity if it owns or controls at least fifty percent (50%) of the shares of the subject entity entitled to vote in the election of directors (or, in the event of an entity that is not a corporation, for the election of the corresponding managing authority);

(b) "**AMC**" means the Academic Hospital at the University of Amsterdam, at Amsterdam, the Netherlands;

(c) [†].;

(d) "**Collaborative Research Agreement**" means the Collaborative Research Agreement dated August 1, 2000 between Xenon and UBC, attached to this Agreement as Annex 1, including any amendments thereto;

(e) "**Contract Period**" means the time period defined in the Collaborative Research Agreement;

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(f) "**Effective Date**" means August 1, 2000;

(g) "**Field of Use**" means gene therapy being [†];

(h) "**Joint Improvements**" has the meaning set out in the License Agreement;

(i) "**License Agreement**" means the form of License Agreement attached to this Agreement as Annex 2, which, except for the expunged portions (which are confidential between Xenon and UBC) is identical to the License Agreement dated August 1, 2000 executed between Xenon and UBC, including any amendments thereto;

(j) "**Licensed Product(s)**" means a Product using or made by a process using the Xenon Licensed Rights;

(k) "**[†] Model**" means the [†] Model which is in the possession of Xenon and/or UBC;

(l) "**Net Sales**" means with respect to any Xenon Licensed Technology or Licensed Product, [†]. Where any Net Sales are derived from a country other than Canada it shall be converted to the equivalent in Canadian dollars on the date AMT is deemed to have received such Net Sales pursuant to the terms hereof at the rate of exchange set by the Bank of Montreal for buying such currency. The amounts of Canadian dollars pursuant to such conversion shall be included in Net Sales.

(m) "**Party**" "**Parties**" means Xenon or AMT or both, as appropriate;

(n) "**Patents**" has the meaning set out in the License Agreement;

(o) "**Product(s)**" has the meaning set out in the License Agreement;

(p) "**Project**" means the project description entitled "LPL Gene Therapy for LPL Deficiency", which is attached to the Collaborative Research Agreement as Appendix A, including any amendments thereto which the Parties and UBC may mutually agree to, from time to time, in accordance with Section 2.1 of the Collaborative Research Agreement;

(q) "**Term**" means the time period defined in Section 17.1 of the License Agreement;

(r) "**UBC**" means the University of British Columbia at Vancouver, BC, Canada;

(s) "UBC-**[†] Technology**" has the meaning set out in the License Agreement;

(t) "**UBC-Amsterdam Technology**" has the meaning set out in the License Agreement;

(u) "**UBC Improvements**" has the meaning set out in the License Agreement;

(v) "**UBC Technology**" has the meaning set out in the License Agreement;

(w) "**Xenon Licensed Technology**" means the Technology and any and all Improvements (as defined in the License Agreement), to the extent such are licensed to Xenon under Section 3.1 or Section 3.2 of the License Agreement; and

(x) "**Xenon Licensed Rights**" means the right, license and privilege granted to Xenon under Section 3.1 and Section 3.2 of the License Agreement.

ARTICLE 2 - COLLABORATIVE RESEARCH

2.1 AMT agrees to assume in their entirety, and to be fully and solely responsible and liable for the performance of the following responsibilities, covenants and obligations of Sponsor under the Collaborative Research Agreement:

(a) all Sponsor responsibilities under Section 3.3 of the Collaborative Research Agreement;

(b) all Sponsor responsibilities under Section 3.4(d) and Section 3.4(e) of the Collaborative Research Agreement;

(c) all Sponsor responsibilities under Section 4.2 of the Collaborative Research Agreement;

(d) all Sponsor responsibilities under Section 4.3 of the Collaborative Research Agreement;

(e) all Sponsor responsibilities under Article 5.0 of the Collaborative Research Agreement;

(f) all Sponsor responsibilities under Article 6.0 of the Collaborative Research Agreement;

(g) all Sponsor responsibilities under Article 7.0 of the Collaborative Research Agreement;

(h) all Sponsor responsibilities under Section 8.4 of the Collaborative Research Agreement;

(i) all Sponsor responsibilities under Section 9.5 of the Collaborative Research Agreement;

(j) all Sponsor responsibilities under Section 10.3 of the Collaborative Research Agreement;

(k) all Sponsor responsibilities under Section 10.4 of the Collaborative Research Agreement;

(l) all Sponsor responsibilities under Article 11 of the Collaborative Research Agreement;

(m) all Sponsor responsibilities under Article 12 of the Collaborative Research Agreement;

(n) all Sponsor responsibilities under Article 13 of the Collaborative Research Agreement;

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(o) all Sponsor responsibilities under Article 14 of the Collaborative Research Agreement; and

(p) all Sponsor responsibilities under Article 15 of the Collaborative Research Agreement.

2.2 All Parties confirm that Section 2.1 herein comprises a complete list of all Sponsor responsibilities, covenants and obligations under the Collaborative Research Agreement, with the sole exception of those responsibilities and obligations under Section 4.1 of the Collaborative Research Agreement.

2.3 AMT further agrees to forward payment in full, in advance, to Xenon in the amounts and in the time frames shown in the following schedule:

Payment Due Date	Amount Due (CDN$)
On execution of this Agreement	$ 75,000.00
November 1, 2000	$ 75,000.00
February 1, 2001	$ 75,000.00
May 1, 2001	$ 75,000.00
August 1, 2001	$ 75,000.00
November l 2001	$ 75,000.00
February 1, 2002	$ 75,000.00
May 1, 2002	$ 75,000.00
Total	**$ 600,000.00**

2.4 Xenon reserves the right to suspend work on the Project, or to immediately terminate the Project and this Agreement upon delivering written notice of same to AMT if AMT fails to make the aforementioned payments within thirty (30) days of the dates herein specified in Section 2.3 above.

2.5 To facilitate AMT's assumption of the Collaborative Research Agreement responsibilities and obligations defined in Section 2.1 above, Xenon agrees as follows:

(a) in a timely manner, Xenon will fulfill all obligations towards UBC, arising from the Collaborative Research Agreement, unless Xenon is unable to fulfill such obligations in a timely manner, or at all, due to a breach by AMT of this Agreement;

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(b) in the event UBC provides Xenon with a copy of a proposed publication or presentation pursuant to Section 7.1 of the Collaborative Research Agreement, Xenon will promptly forward such copy to AMT;

(c) in the event UBC provides Xenon with notification pursuant to Section 8.4 of the Collaborative Research Agreement regarding the conception of intellectual property in the performance of the Project, Xenon will promptly forward a copy of such notification to AMT; and

(d) any notices or reports provided by UBC to Xenon under the Collaborative Research Agreement will be promptly forwarded to AMT.

2.6 In consideration of AMT's assumption of responsibilities and obligations under Sections 2.1 and 2.3 herein, Xenon agrees to transfer to AMT any rights or benefit Xenon may accrue as Sponsor during the Contract Term under Sections 2.2, 8.2, 8.3, and 8.4, and Article 3 and Article 9 of the Collaborative Research Agreement.

2.7 Xenon shall not terminate the Collaborative Research Agreement for whatever reason, unless AMT has given its prior written consent thereto. Notwithstanding the foregoing, Xenon may terminate the Collaborative Research Agreement if AMT is in breach of this Agreement.

2.8 Any amendment, deletion or addition of any provisions of the Collaborative Research Agreement to be made during the Contract Period, requires the prior written consent of AMT.

ARTICLE 3 - SUBLICENSE

3.1 In consideration of the sub-license fees, milestone payments and royalty payments reserved herein, and the covenants of AMT contained herein, Xenon hereby grants to AMT within the Field of Use, and AMT accepts, the exclusive worldwide right, sublicense and privilege under the Xenon Licensed Rights to use the Xenon Licensed Technology and to use, manufacture, distribute and sell Licensed Products (the "**Sublicense**").

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

3.2 Xenon shall not terminate the License Agreement unless AMT has given its prior consent thereto, such consent not to be unreasonably withheld. Notwithstanding the foregoing, Xenon may terminate the License Agreement, without AMT's consent, if AMT is in breach of this Agreement.

3.3 Any alteration, deletion or addition of any provisions of the License Agreement to be made during the Term requires the prior written consent of AMT, such consent not to be unreasonably withheld.

3.4 This Sublicense is personal to AMT.

3.5 AMT may not grant a further sublicense to a third party for the purpose of developing, marketing, selling, manufacturing or distributing Xenon Licensed Technology or Licensed Products, unless Xenon and UBC have given their prior written consent thereto, such consent not to be unreasonably withheld. Notwithstanding the foregoing, AMT shall not be obligated to obtain UBC's consent to the granting of a sub-sublicense if the proposed sub-sublicense has a market capitalization in excess of CAN$[†] at the time of the granting of the sub-sublicense.

3.6 AMT shall deliver to Xenon a copy of each sub-sublicense granted within 30 days after execution.

3.7 AMT may register this Agreement with the relevant patent authorities in those jurisdictions in which AMT carries on business. At AMT's request, Xenon and UBC will provide reasonable assistance to AMT with respect to such registrations, provided that all reasonable costs incurred by UBC or Xenon in association with such registrations, including all legal expenses, shall be paid for by AMT. UBC and Xenon will, on request by AMT, endeavour to provide an estimate of such costs.

ARTICLE 4 - ASSIGNMENT

4.1 The Parties shall not be entitled to assign, transfer, mortgage, charge or otherwise dispose of any or all of the rights, duties or obligations granted to it under this Agreement, to any third party, unless the other Party and UBC have given their prior

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written permission thereto, such consent not to be unreasonably withheld. Said permission however, will not be required in the event AMT assigns this Agreement to an Affiliate, or assigns all of its business or substantially all of its business to a third party, as part of a merger, acquisition or other business combination.

4.2 Notwithstanding AMT's agreement to perform certain responsibilities, covenants and obligations of Xenon under the Collaborative Research Agreement, nothing in this Agreement shall be deemed to be an assignment of the Collaborative Research Agreement by Xenon.

ARTICLE 5 - PAYMENTS

5.1 Upon the Date of Execution, AMT shall pay to Xenon a non-refundable initial sub-license fee of CAN$75,000.00 (seventy-five thousand Canadian Dollars).

5.2 AMT shall reimburse Xenon:

(a) for the patent and legal costs incurred by Xenon before the Effective Date, such costs not to exceed CAN$80,000.00 (eighty thousand Canadian Dollars); and

(b) for all patent and legal costs incurred by Xenon after the Effective Date related to the preparing, filing, prosecuting or maintaining of patent(s) or patent application(s) sublicensed to AMT under Section 3.1 above.

These amounts will be paid to Xenon within [†] days after AMT's receipt of the pertaining specified invoices from Xenon, accompanied by copies of the relevant invoices of patent attorneys and any other third parties concerned. As of the date of execution of this Agreement, Xenon agrees to consult with AMT prior to incurring any and all significant patent and legal costs, and obtain AMT's consent prior to authorizing its patent agents and/or patent counsel to incur said costs (whenever reasonably possible given the circumstances and timelines involved), such consent which shall not be unreasonably withheld.

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5.3 In addition to the payments, referred to in Sections 2.3, 5.1 and 5.2, AMT shall make the following payments to Xenon on the achievement of the following specified milestones:

(a) [†] CAN$ ([†] Canadian Dollars) to be paid within [†] days after [†]; and

(b) [†] CAN$ ([†] Canadian Dollars) to be paid within [†] days after the commencement of the first Phase I clinical trial for any Licensed Products; and

(c) 100,000.00 CAN$ (one hundred thousand Canadian Dollars) to be paid within [†] days after the commencement of the first Phase II clinical trial for any Licensed Products; and

(d) [†] CAN$ ([†] Canadian Dollars) to be paid within [†] days after the commencement of the first Phase III clinical trial for any Licensed Products; and

(e) [†] CAN$ ([†]Canadian Dollars) to be paid within [†] days after [†]; and

(f) 200,000.00 CAN$ (two hundred thousand Canadian Dollars) to be paid within [†] days after the obtaining of the first EMEA Approval for any Licensed Products.

5.4 In addition to the milestone payments as referred to in Section 5.3 and in further consideration of the Sublicense granted hereunder, AMT shall make the following payments with respect to each additional Licensed Product, provided that said additional Licensed Product has a clinical indication different from a Licensed Product under which AMT has made payments under Section 5.3(b), 5.3(c), 5.3(d), 5.3(e) or 5.3(f):

(a) [†] CAN$ ([†]Canadian Dollars) to be paid within [†] days after the commencement of each additional Phase I clinical trial for a Licensed Product; and

(b) [†] CAN$ ([†] Canadian Dollars) to be paid within [†] days after the commencement of each additional Phase II clinical trial for a Licensed Product; and

(c) [†] CAN$ ([†] Canadian Dollars) to be paid within [†] days after the commencement of each additional Phase III clinical trial for a Licensed Product; and

(d) [†] CAN$ ([†] Canadian Dollars) to be paid within [†] days after the obtaining of each additional NDA Approval for a Licensed Product; and

(e) [†] CAN$ ([†] Canadian Dollars) to be paid within [†] days after the obtaining of each additional EMEA Approval for a Licensed Product.

5.5 In the event clinical trails for any indication will start with a combined Phase I/ Phase II trial, the milestone payment for the combined Phase I/ Phase II trial will be CAN$ 100,000.00 (one hundred thousand Canadian Dollars) and no separate Phase I or Phase II milestone payments will be due.

5.6 In the event AMT shall receive compensation from a third party relating to the Xenon Licensed Technology or to Licensed Products in any other form than in the form of a royalty, such as in the form of milestone payments, AMT shall pay to Xenon either an amount equal to [†]% ([†] percent) of the full amount of such payments to be received from the third party or the milestone payments specified in Section 5.3 and/or Section 5.4, whichever is higher.

5.7 If Xenon would play a significant role in initiating or facilitating a definitive partnership between AMT and a pharmaceutical company with respect to the development of Xenon Licensed Technology or Licensed Products, Xenon's share of the payments to be received by AMT from a third party, as referred to in Section 5.6, shall increase from [†] % to [†] % ([†] percent). If AMT and Xenon would not be able to agree on the significance of the role of Xenon as aforesaid within 30 days after the date of execution of the agreement between AMT and a pharmaceutical company, AMT and Xenon shall appoint a mutual acceptable person as an independent evaluator to determine whether or not Xenon is entitled to such increase in payment. The decision made by the evaluator will be final and binding for the Parties.

5.8 AMT will reimburse Xenon for any and all costs Xenon incurs in relation to the obtaining of [†]' consent pursuant to Section 3.2(a) of the License Agreement, provided that AMT has first provided Xenon with its written approval regarding any such Xenon expenditures, such approval which will not be unreasonably withheld.

5.9 AMT shall pay to Xenon the milestones due under Sections 5.3 and 5.4, in the timeframes provided under Sections 5.3 and 5.4, with the following exceptions:

(a) If AMT ceases all development of a particular Licensed Product (the "**First Product**") after having made payments with respect to such First Product under Sections 5.3 and 5.4 (as applicable), following the accomplishment of any of the aforementioned milestones, there shall be no milestone payment due under Sections 5.3 and 5.4 (as applicable) upon the accomplishment of that same milestone with respect to a subsequent Licensed Product (the "**Subsequent Product**") for the same clinical indication, provided that the accomplishment of the milestone relating to the Subsequent Product occurs within [†] years following the accomplishment of the same milestone with respect to the First Product for the same clinical indication;

(b) If the First Product and the Subsequent Product, referred to in Section 5.9(a) above, are both being developed at the same time, AMT may delay paying the relevant milestones under Sections 5.3 and 5.4 (as applicable) and Section 5.9(a) as they relate to the Subsequent Product, until the earlier of:

(i) such time as AMT has ceased development of the First Product, or

(ii) until such time as the Subsequent Product receives United States New Drug Approval; and

5.10 For greater certainty, and notwithstanding any provisions within this Agreement to the contrary, the parties agree that:

(a) When milestones are achieved with respect to any Subsequent Product which were not previously paid with respect to a corresponding First Product for the same clinical indication, such milestone payments shall be paid pursuant to Sections 5.3 and/or 5.4 (as applicable); and

(b) If AMT receives United States New Drug Approval for any Licensed Product, all milestone payments due under Sections 5.3 and/or 5.4 (as applicable) shall be immediately due and owing for that particular Licensed Product, and paid forthwith at that time by AMT.

5.11 The payments as referred to in this Article 5 will not be offset against any royalties.

ARTICLE 6 - ROYALTY

6.1 In consideration of the rights and Sublicense granted hereunder by Xenon to AMT, AMT shall pay to Xenon during the Term a royalty on Net Sales, as follows:

(a) [†]% ([†] percent) on Net Sales made in any country where a Xenon Licensed Technology or Licensed Product is covered by a valid patent claim; and

(b) [†]% ([†] percent) on Net Sales made in any country where a Xenon Licensed Technology or a Licensed Product is not covered by a valid patent claim.

6.2 In the event AMT shall grant (sub)licenses for the Xenon Licensed Technology or Licensed Products to any third parties and provided that such Xenon Licensed Technology or Licensed Products are subject to protection by a valid patent claim, AMT shall make the following payments to Xenon:

(a) [†]% ([†] percent) of all royalties received from any such (sub)licensee on the sales of Xenon Licensed Technology and Licensed Products by such (sub)licensee; or

(b) [†]% ([†] percent) of all royalties received from any such (sub)licensee on the sales of Xenon Licensed Technology and Licensed Products by such (sub)licensee, in the event Xenon has played a significant role in initiating and facilitating a definitive partnership between AMT and a pharmaceutical company, as referred to in Section 5.7.

6.3 In the event AMT will be obliged to pay stacking royalties to independent third parties for the obtaining of one or more licenses to use technologies which are essential to legally market and/or sell the Licensed Products, [†].

6.4 Within [†] days following the end of each calendar quarter during the Term and within [†] days following the end of the calendar quarter in which the Term will expire, AMT shall send to Xenon a written report showing the total amount of Net Sales, specified per Xenon Licensed Technology and Licensed Product and per country, during the preceding calendar quarter and the amount of royalties and other compensation or consideration received from its (sub)licensees, Affiliates or other third parties related to the Xenon Licensed Technology and Licensed Products.

6.5 Concurrently with sending the written report as referred to in Section 6.4, AMT shall pay to Xenon the total amount of all monies due in respect of the preceding calendar quarter by transfering such monies to a bank account designated by Xenon, in the name of Xenon, and/or (in the alternative) by an alternative method of payment, in accordance with Xenon's instructions from time to time in respect of such payments.

6.6 All amounts referred to in this Agreement are net of any source and withholding taxes. Any source or withholding taxes payable in connection with any payments made hereunder are for the account of Xenon.

ARTICLE 7 - CONTROL OF PAYMENTS

7.1 AMT shall keep at its principal place of business true, clear and separate accounts and records with respect to the Net Sales and of all other payments received from its (sub)licensees, Affiliates or other third parties and of all amounts payable to Xenon hereunder.

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7.2 Xenon shall have the right to appoint a certified public auditor or accountant reasonably acceptable to AMT, which, during the regular business hours of AMT, and upon reasonable notice, may examine such accounts and records to the extent necessary only for the purpose of verifying the reports and payments required hereunder. AMT shall furnish such reasonable evidence as such representative will deem necessary to verify the accounting and will permit such representative to make copies of or extracts from such accounts, records and agreements at Xenon's expense. If an inspection of AMT records by Xenon shows an under-reporting or under payment by AMT of any amount to Xenon, in excess of [†]% for any 12 month period, then AMT shall reimburse Xenon for the cost of the inspection as well as pay to Xenon any amount found due (including any late payment charges or interest) within [†] days of notice by Xenon to AMT. All accounts and records shall be retained for [†] years from the date of their origin. Any audit under this Section 7.2 shall be at the expense of Xenon.

7.3 The calculation of royalties shall be carried out in accordance with:

(a) generally accepted Canadian accounting principles ("GAAP");

(b) the standards and principles adopted by the U.S. Financial Accounting Standards Board ("FASB"); and/or

(c) any other generally accepted and comparable accounting principle standard(s) that may be agreed upon in writing between the parties from time to time,

any or all of the above which will be applied on a consistent basis.

ARTICLE 8 - CONFIDENTIALITY, PUBLICATION

8.1 During the Term of this Agreement and for a period of ten (10) years following the termination of this Agreement, each Party shall maintain in confidence all information disclosed by the other Party which is identified as confidential and which is confirmed in writing and marked "confidential" or otherwise properly labelled within thirty (30) days of such original disclosure, including without limitations, any

and all knowledge, know-how, information and/or information and/or techniques related to the Xenon Licensed Technology, Licensed Products, or the Project, and shall not, except as permitted by this Agreement, use such information or disclose the same to anyone other than those of its Affiliates, its (sub)licensees, direct employees, consultants, investigators and collaborators otherwise as is necessary in connection with such Party's activities, responsibilities and obligations as set forth in this Agreement. Each Party shall obtain a written agreement prior to disclosure to such Affiliates, (sub)licensees, direct employees, consultants or investigators containing obligations to hold in confidence and not make use of such information for any purposes other than as permitted by this Agreement, which obligations will not be less stringent than the obligations in this Section 8.2.

Each Party shall use a similar effort to that which it uses to protect its own trade secrets or proprietary information to ensure that its Affiliates, its (sub)licensees, direct employees, consultants, collaborators and investigators do not disclose or make any unauthorised use of such information.

8.2 The confidentiality obligations of Section 8.1 shall not apply to the extent that:

(a) the Party who has received the information (hereinafter referred to as "RECIPIENT") is required to disclose information by order or regulation of a governmental agency or court of competent jurisdiction or

(b) the RECIPIENT can demonstrate that:

(i) the disclosed information was at the time of such disclosure by the RECIPIENT already in the public domain other than as a result of actions of the RECIPIENT, its Affiliates, direct employees, (sub)licen-sees, consultants or investigators, in violation hereof; or

(ii) the disclosed information was rightfully and lawfully known by the RECIPIENT (as shown by its written records) prior to the date of disclosure to the RECIPIENT in connection with this Agreement or was independently developed without regard to the information; or

(iii) the disclosed information was received by the RECIPIENT (as shown by its written records) on an unrestricted basis from a source unrelated to any Party and not under a duty of confidentiality to the other Party.

8.3 Except as provided by law, each Party shall hold the existence and contents of this Agreement in strictest confidence, unless it has obtained the prior written consent thereto from the other Party, such consent not to be unreasonably withheld. Said consent is not required for the disclosure of the contents of this Agreement to UBC.

ARTICLE 9 - PATENT INFRINGEMENT

9.1 In the event that AMT or any of its sublicensees, as a result of the use of the Xenon Licensed Technology and/or any Licensed Products, is warned or sued by a third party alleging or charging infringement of any patents or patent applications known to the public after the Effective Date, AMT shall promptly notify Xenon.

9.2 Upon receiving the prior written consent of Xenon, such consent not to be unreasonably withheld, AMT shall have the right, at its expense, for settling or defending such warning or litigation for patent infringement in which the alleged infringing process or product giving rise to liability for damages includes any use of the Xenon Licensed Technology by AMT or any of its (sub)licensees. AMT acknowledges and agrees that Xenon's ability to provide such written consent may be contingent upon Xenon being able to obtain the prior consent of [†], UBC, and/or AMC, as appropriate. In such case, AMT will consult with Xenon regarding its decisions in such settlement and defence, and Xenon shall co-operate fully with AMT, so long as all the direct and indirect costs and expenses of bringing and conducting any such defence or settlement shall be borne by AMT, or its (sub)licensees, and in such event all recoveries shall enure to AMT or its (sub)licensees.

Notwithstanding the foregoing, no decision or action concerning or governing any final disposition of a warning or suit shall be taken without full consultation and approval by Xenon. Xenon and/or UBC may also elect to participate formally in any

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litigation involving the warning or suit to the extent that the court may permit, but in such case any additional expenses of Xenon or UBC generated by such formal participation will be paid by Xenon or UBC, as appropriate, (subject to the possibility of recovery of some or all of their respective additional expenses from the litigant).

9.3 Each of the Parties will refrain from any and all acts that may harm the patentability of the Xenon Licensed Technology in any jurisdiction.

9.4 In the event that any of the Parties is of the opinion that the Xenon Licensed Technology is or could be infringed by any third party, the Parties shall consult together on the actions to be taken against the concerning third party.

In the event the Parties will decide to take any such actions, including the institution of legal proceedings jointly, the Parties shall share the costs thereof and all compensations to which such infringing third party may be sentenced to pay.

In the event any of the Parties will decide not to participate in any action against the infringing third party, the other Party may take such action in its own name and at its own expense, in which event the Party which decided not to participate, shall render all necessary assistance to such actions.

ARTICLE 10 - REPRESENTATIONS, WARRANTIES AND COVENANTS

10.1 Xenon warrants and represents that it is fully authorised and entitled to enter into this Agreement and to grant all rights and licenses hereunder to AMT. Xenon furthermore warrants and represents that further to Section 4.1 of the License Agreement, and as evidenced by UBC's endorsement on the signatory page of this Agreement, UBC has approved Xenon's granting of the rights and licenses hereunder to AMT.

10.2 Xenon warrants and represents that it has been advised by UBC that Dr. Michael Hayden has assigned all of his intellectual property rights, if any, to the Xenon Licensed Technology to UBC.

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10.3 Except as otherwise provided for in this Agreement, AMT shall indemnify, hold harmless and defend Xenon and UBC, their respective Governors, Directors, Officers, employees, faculty, students, invitees, and agents against any and all liabilities (including product liability), damages, losses or injury, death, costs, and expenses, whether direct or indirect, consequential, incidental or otherwise, including attorney's fees and associated disbursements, arising in any manner from the Collaborative Research Agreement, the License Agreement, this Agreement and/or any sub-sublicense granted by AMT under this Agreement, including the receipt or use by AMT or AMT's sub-licensees of any technology, data or other results, arising from or out of same, howsoever the same may arise.

10.4 AMT hereby covenants to observe and perform the terms and conditions contained in the License Agreement, to the extent that the same are applicable.

10.5 AMT shall use its commercially best efforts to develop, promote, market and sell all Xenon Licensed Technology and Licensed Products.

10.6 AMT covenants and agrees that it shall provide to Xenon on each of the first five anniversaries of the Commencement Date of this Agreement, a written report (the "**Status Report**") summarizing. AMT's development activities relating to the Xenon Licensed Technology that sets out all of the following information:

(a) a summary of the research and development activities that AMT has undertaken in the course of the preceding 12 months to develop and commercialize the Xenon Licensed Technology;

(b) a detailed summary of any and all improvements, variations, updates, modifications and enhancements to the Xenon Licensed Technology which AMT has developed and/or acquired in the course of the preceding 12 months, including any improvements, variations, updates, modifications and enhancements to the Xenon Licensed Technology of which AMT has been advised by any sub-sublicensee; and

(c) any and all corporate alliances formed by AMT related to the Xenon Licensed Technology in the course of the preceding 12 months, including any such corporate alliances of which AMT has been advised by a sub-sublicensee.

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10.7 Notwithstanding Section 10.1, Xenon makes no representations, conditions or warranties, either express or implied, with respect to Xenon Licensed Technology or the Licensed Products. Without limiting the generality of the foregoing, Xenon specifically disclaims any implied warranty, condition or representation that the Xenon Licensed Technology or the Licensed Products:

(a) shall correspond with a particular description;

(b) are of merchantable quality;

(c) are fit for a particular purpose; or

(d) are durable for a reasonable period of time.

Xenon shall not be liable for any loss, whether direct, consequential, incidental or special, which AMT suffers arising from any defect, error, fault or failure to perform with respect to the Xenon Licensed Technology or Licensed Products, even if AMT has been advised of the possibility of such defect, error, fault or failure. AMT acknowledges that it has been advised by Xenon to undertake its own due diligence with respect to the Xenon Licensed Technology.

10.8 AMT will obtain, at its expense, all registrations and regulatory approvals necessary for it to exploit any of the Xenon Licensed Technology or Licensed Products. Nothing in this Agreement shall be construed as:

(a) a warranty or representation by Xenon as to title to the Xenon Licensed Technology and/or that anything made, used, sold or otherwise disposed of under the Sublicense granted in this Agreement is or will be free from infringement of patents, copyrights, trade-marks, industrial design or other intellectual property rights;

(b) an obligation by Xenon to bring or prosecute or defend actions or suits against third parties for infringement of patents, copyrights, trade-marks, industrial designs or other intellectual property or contractual rights; or

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(c) the conferring by Xenon of the right to use in advertising or publicity the name Xenon or UBC or their respective trade-marks.

ARTICLE 11 - INSURANCE

11.1 Unless satisfactory arrangements are made between AMT and Xenon with respect to a self-insurance program or the requirement for insurance hereunder is waived by Xenon [†] days prior to the commencement of any human clinical trials or other Licensed Product testing involving human subjects by AMT or any sub-sublicensee, then AMT shall procure and maintain, during the term of this Agreement, the insurance outlined in Sections 11.2 and 11.3 and otherwise comply with the insurance provisions contained in Sections 11.2 and 11.3.

11.2 AMT shall give written notice to Xenon:

(a) [†] days prior to the commencement of any human clinical trials or the Product testing involving human subjects by AMT or any sub-sublicensee (the "**Human Clinical Trials**"); and

(b) [†] days prior to the first sale of any Licensed Product by AMT or any sub-sublicensee of the terms and amount of the appropriate public liability, product liability and errors and omissions insurance which it has placed. Such insurance shall in no case be less than the insurance which a reasonable and prudent businessperson carrying on a similar line of business would acquire. This insurance shall be placed with a reputable and financially secure insurance carrier, shall include Xenon, UBC, UBC's Board of Governors, their respective directors, faculty, officers, employees, students and agents as additional insureds, and shall provide primary coverage with respect to the activities contemplated by this Agreement. Such policy shall include severability of interest and cross-liability clauses and shall provide that the policy shall not be cancelled or materially altered except upon at [†] days' written notice to Xenon. Xenon shall have the right to require reasonable amendments to the terms or the amount of coverage contained in the policy. Failing the parties agreeing on the appropriate terms or the amount of

coverage, then the matter shall be determined by arbitration. AMT shall provide Xenon with certificates of insurance evidencing such coverage 20 days before commencement of Human Clinical Trials and [†] days prior to the sales of any Licensed Product and AMT covenants not to start Human Clinical Trials, or sell any Licensed Product before such certificate is provided and approved by Xenon, or to sell any Licensed Product at any time unless the insurance outlined in this Section 11.2 is in effect.

11.3 AMT shall require that each sub-sublicensee under this Agreement shall procure and maintain, during the term of the sub-sublicense, public liability, product liability and errors and omissions insurance in reasonable amounts, with a reputable and financially secure insurance carrier or provide satisfaction arrangements through an appropriate self-insurance program. AMT shall use its best efforts to ensure that any and all such policies of insurance required pursuant to this Article shall contain a waiver of subrogation against the University, Xenon, UBC's Board of Governors and their respective directors, faculty, officers, employees, students and agents.

ARTICLE 12 - TERM AND TERMINATION

12.1 All rights, obligations and responsibilities of the Parties in relationship to the Collaborative Research Agreement shall terminate upon the expiry of the Contract Period. In the event of a delay of the Project, the Parties shall consult together on the extension of the Contract Period.

12.2 This Agreement shall commence on the Effective Date, and may be terminated upon mutual written agreement between the Parties.

12.3 Each Party will have the right to terminate this Agreement, without judicial intervention, upon written notice to the other Party with immediate effect, if such other Party:

(a) passes a resolution or a Court makes an order for its winding up;

(b) has a liquidator, receiver or administrator appointed over its business or any material part of its assets;

(c) is or becomes insolvent; or

(d) ceases to carry on its business.

12.4 Unless otherwise provided under this Agreement, if either Party defaults in the performance of, or fails to be in compliance with, any condition or covenant of this Agreement and any such default or non-compliance shall not have been remedied, or steps initiated to remedy the same to the other Party's reasonable satisfaction within [†] days after receipt by the defaulting Party of a written notice thereof from the other Party, the Party not in default may forthwith terminate this Agreement at its option by giving written notice to the other Party.

12.5 Any delays in or failure of performance by Xenon under this Agreement shall not be considered a breach of this Agreement if and to the extent caused by occurrences beyond the reasonable control of Xenon, including but not limited to acts of God, regulations or laws of any government, strikes or other considered acts of workers, fires, floods, explosions, riots, wars, rebellion and sabotage, and any time for performance hereunder shall be extended by the actual time of delay caused by such occurrence, or caused by any other circumstances which were unknown or unforeseen at the Effective Date.

12.6 Termination of this Agreement by any Party for any reason shall not affect the rights and obligations of the Parties accessed prior to the effective date of termination of this Agreement. No termination or expiry of this Agreement, however effectuated, shall release the Parties from their rights and obligations under Section 2.1(j), Article 7, Article 8, and Article 10 which shall survive the termination or expiration of this Agreement.

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ARTICLE 13 - INVALIDITY, UNENFORCEABILITY

13.1 If any provision(s) of this Agreement are or become invalid, or are ruled illegal by any court of competent jurisdiction, or are deemed unenforceable under then current applicable law from time to time in effect during the term hereof, it is the intention of the Parties that the remainder of this Agreement shall not be affected thereby. It is further the intention of the Parties that in lieu of each such provision which is invalid, illegal, or unenforceable, there be substituted or added as part of this Agreement, a provision which shall be as similar as possible in economic and business objectives as intended by the Parties to such invalid, illegal, or unenforceable provision, but which shall be valid, legal, and enforceable, and shall be mutually agreed by the Parties.

ARTICLE 14 - ENTIRE AGREEMENT, AMENDMENTS

14.1 This Agreement, including all Annexes attached hereto, contains the entire agreement of the Parties regarding the subject matter hereof and supersedes all prior agreements, understandings and negotiations regarding the same, and further, also supersedes the Heads of Agreement entered into between the Parties on August 3, 2000. This Agreement may not be changed, modified, amended or supplemented except by a written instrument signed by both Parties hereto.

ARTICLE 15 - NOTICES

15.1 All notices required by this Agreement shall be in writing. All notices and reports shall be sent by telefax or mailed by airmail, postage prepaid to the Parties at the following addresses or such other addresses as may be designated in writing by the respective Parties:

To AMT:

Meibergdreef 61
1105 BA
Amsterdam, the Netherlands
Attention: Dr. Eric van der Aa

To Xenon:

Suite 100 — 2386 East Mall
Vancouver, B.C.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

Canada V6T 1Z3
Attention: Dr. Shafique Fidai

Any notices shall be deemed given when received by the other Party.

ARTICLE 16 - RELATIONSHIP

16.1 Nothing contained in this Agreement is intended nor is to be construed so as to constitute AMT and Xenon as partners or joint venturers with respect to this Agreement. Neither Party hereto shall have any express or, implied right or authority to assume or create any obligations on behalf of or in the name of the other Party or to bind the other Party to any other contract, agreement or undertaking with any third party.

ARTICLE 17 - WAIVER

17.1 The waiver by either Party of a breach of any provisions contained herein shall be in writing and shall in no way be construed as a waiver of any succeeding breach of such provision or the waiver of the provision itself.

ARTICLE 18 - GOVERNING LAW, DISPUTES

18.1 This Agreement shall be construed and interpreted according to the laws of the Province of British Columbia and the laws of Canada in force therein without regard to its conflict of law rules.

18.2 Any disputes arising out of or in relation to this Agreement shall, to the exclusion of all others, be referred to the Supreme Court of British Columbia.

ARTICLE 19 - GENERAL

19.1 Time shall be of the essence of this Agreement.

21.2 The Parties acknowledge and agree that the *International Sale of Goods Contracts Convention Act* and the United Nations Convention on Contracts for the International Sale of Goods have no application to this Agreement.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

21.3 This Agreement may be executed in counterparts, or facsimile counterparts, each of which when executed by either of the Parties shall be deemed to be an original and such counterparts shall together constitute one and the same Agreement.

IN WITNESS WHEREOF, duly authorized signatories of the Parties hereto have executed this Agreement as of the date(s) indicated below, but effective as of the Effective Date.

Xenon Genetics Inc.

/s/ Frank Holler

By:

Date: 18 June 2001

Amsterdam Molecular Therapeutics B.V.

/s/ J. Boesen

By: Managing Director

Date : 06 June 2001

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COLLABORATIVE RESEARCH AGREEMENT

This Agreement dated for reference the 1st day of August, 2000.

BETWEEN:

XENON GENETICS INC., a Canadian corporation having an address at suite 100 - 2386 East Mall, Vancouver, BC, V6T 1Z3

(the "***Sponsor***")

AND:

THE UNIVERSITY OF BRITISH COLUMBIA, a corporation continued under the *University Act* of British Columbia and having its administrative offices at 2075 Wesbrook Mall, in the City of Vancouver, in the Province of British Columbia, V6T 1W5;

(the "***Research Organization***")

WHEREAS:

A. The research program contemplated by this Agreement is of mutual interest and benefit to the Research Organization and to the Sponsor, will further the instructional and research objectives of the Research Organization in a manner consistent with its status as a non-profit, tax-exempt, educational institution, and may derive benefits for both Sponsor and Research Organization through inventions, improvements, and/or discoveries; and

B. The parties acknowledge that Dr. Michael Hayden has an appointment within the Research Organization and is also Chief Scientific Officer of the Sponsor and that Dr. Michael Hayden will be required to comply with the policies of the Research Organization relating to conflicts of interest.

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the premises and of the mutual covenants herein set forth, the parties hereto have covenanted and agreed as follows:

1.0 DEFINITIONS:

1.1 In this Agreement, unless a contrary intention appears, the following words and phrases shall mean:

(a) "***Project***" shall mean the project as specifically described in Appendix "**A**" hereof which shall be carried out under the direction of the Investigator.

(b) "***Investigator***" shall mean Dr. Michael Hayden of the Department of Medical Genetics at the University of British Columbia.

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(c) *"**Contract Period**"* shall mean August 1, 2000 through July 31, 2002.

(d) *"**Confidential Information**"* shall mean any and all knowledge, know-how, information, and/or techniques disclosed by the one party (referred to in this capacity as the *"**Provider**")* to another (referred to in this capacity as the *"**Recipient**")* relating to the Project, including, without limiting the generality of the foregoing, all research, data, specifications, plans, drawings, prototypes, models, documents, records, instructions, manuals, papers, or other materials of any nature whatsoever, whether written or otherwise, relating to same. In order to constitute *"Confidential Information"* for the purposes of this Agreement, the Provider must clearly identify it in writing as being confidential, or if the disclosure takes place orally or in some other non-tangible form, the Provider must summarize it in writing and identify it as being confidential within 30 days of making the disclosure. Furthermore, such disclosures shall not be considered *"Confidential Information"* for the purposes of this Agreement if and when it:

(i) is made subject to an order by judicial or administrative process requiring the Recipient to disclose any or all of the Confidential Information disclosed to it by the Provider, provided however that the Recipient shall promptly notify the Provider and allow the Provider reasonable time to oppose such process before disclosing any of the Confidential Information disclosed to it by the Provider;

(ii) is published or becomes available to the general public other than through a breach of this Agreement;

(iii) is obtained by the Recipient from a third party with a valid right to disclose it, provided that said third party is not under a confidentiality obligation to the Discloser;

(iv) is independently developed by employees, agents or consultants of the Recipient who had no knowledge of or access to the Confidential Information disclosed to it by another party to this Agreement as evidenced by the Recipient's business records; or

(v) was possessed by the Recipient prior to receipt from the Provider, other than through prior disclosure by the Provider, as evidenced by the Recipient's business records.

(e) *"**License Agreement**"* shall mean the License Agreement dated as of August 1, 2000 between the Sponsor and the Research Organization.

(f) *"**Research Organization Intellectual Property**"* shall mean, individually and collectively, all inventions, improvements, and/or discoveries which are conceived and/or made by one or more employees of the Research Organization during the Contract Period in the performance of the Project.

(g) *"**Sponsor Intellectual Property**"* shall mean, individually and collectively, all inventions, improvements, and/or discoveries which are conceived and/or made solely by one or more employees of the Sponsor during the Contract Period in the performance of the Project.

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(h) *"**Joint Intellectual Property**"* shall mean, individually and collectively, all inventions, improvements, and/or discoveries which are conceived and/or made jointly by one or more employees of the Research Organization and by one or more employees of the Sponsor and/or any of the Sponsor's sublicensees under the License Agreement during the Contract Period in the performance of the Project.

2.0 RESEARCH WORK:

2.1 The Research Organization shall commence the performance of the Project promptly after the effective date of this Agreement, and shall use reasonable efforts to perform the Project substantially in accordance with the terms and conditions of this Agreement. Notwithstanding anything to the contrary in this Agreement, the Sponsor and the Research Organization may at any time amend the Project by mutual written agreement.

2.2 In the event that the Investigator becomes unable or unwilling to continue the Project, and a mutually acceptable substitute is not available, the Research Organization and the Sponsor shall each have the option to terminate the Project and this Agreement by providing the other party with written notice of same.

2.3 In the performance of all services hereunder:

(a) the Research Organization shall be deemed to be and shall be an independent contractor;

(b) neither party is authorized or empowered to act as agent for the other for any purpose and shall not on behalf of the other enter into any contract, warranty, or representation as to any matter; and

(c) neither party shall be bound with respect to third parties by the acts or conduct of the other.

3.0 REPORTS AND CONFERENCES:

3.1 Interim written project reports shall be provided by the Research Organization to the Sponsor from time to time during the Contract Period, at mutually agreed to intervals, and a final project report shall be submitted by the Research Organization to the Sponsor within 60 days after the conclusion of the Contract Period or early termination of this Agreement, whichever is sooner.

3.2 Interim written financial statements shall be provided by the Research Organization to the Sponsor from time to time during the Contract Period, at mutually agreed to intervals, and a final financial statement shall be submitted by the Research Organization to the Sponsor within 60 days after the conclusion of the Contract Period or early termination of this Agreement, whichever is sooner.

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3.3 During the term of this Agreement, representatives of the Research Organization will meet with representatives of the Sponsor at times and places mutually agreed upon to discuss the progress and results, as well as ongoing plans, or changes therein, of the Project.

3.4 The Project will be managed and co-ordinated by a Research Steering Committee, which shall be authorised to take all decisions in respect of the Project, as follows:

(a) The Research Steering Committee will consist of two representatives on behalf of the Sponsor and two representatives on behalf of the Research Organization, all representatives each having one vote. A representative on behalf of the Sponsor will be the chair of the Research Steering Committee;

(b) All Project decisions will be taken unanimously. If the votes are equally divided, the issue voted on will be submitted to advisors appointed by the Research Organization and the Sponsor (presently [†] on behalf of the Sponsor and [†] on behalf of the Research Organization). If the two advisors are not be able to reach an agreement on the issue concerned, the issue will be discussed by the Director, University Industry Liaison Office of the Research Organization and the President/CEO of the Sponsor in order to try to reach an agreement. If an agreement cannot be reached in a timely fashion by these two individuals, the arbitration provisions of Article 14.2 will then apply;

(c) Upon request of the Sponsor, the representative of the Research Organization who will be responsible for the execution of the research activities under the Project within the Research Organization will attend the meeting of the Research Steering Committee and shall give all necessary information on the execution of the Project that the Sponsor and/or the Research Organization may desire;

(d) The Research Steering Committee shall meet either by telephone, videoconference or in person either in Vancouver or in Amsterdam. Minutes of all meetings will be made by a secretary to be appointed by the Sponsor, who will attend all meetings. The Sponsor will send minutes of each meeting to all members of the Research Steering Committee at least two (2) weeks before the date of the next meeting; and

(e) If the parties agree to hold the meeting in Amsterdam all reasonable travel costs to be incurred by the representatives of the Sponsor and/or the Research Organization in the Research Steering Committee and if so requested by the Sponsor, any other employees of the Sponsor or the Project leader of the Research Organization, will be paid in advance where possible, and/or reimbursed by the Sponsor, provided that the Sponsor has given its prior consent to each travel plan and the approximate cost thereof.

3.5 All employees of the Research Organization working on the Project shall, on a day to day basis, keep written records of all research activities performed and Research Organization Intellectual Property and Joint Intellectual Property conceived and/or made during the performance of the Project, according to commonly accepted standards of workmanship. In any event, all records shall be of such quality and meet standards that reasonably comply with generally accepted pre-clinical requirements.

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3.6 The Research Organization shall devote reasonable efforts (having regard to the constraints and working environment of an academic laboratory) to provide the Sponsor with all study protocols and final reports of all individual studies with respect to the Project in the Sponsor's format and according to the Sponsor's standards within 30 (thirty) days after the end of each calendar quarter.

3.7 At the Sponsor's discretion, all rights and responsibilities of the Sponsor above may be performed by the Sponsor's designate, or approved sublicensee or assignee, as appropriate.

4.0 COSTS, BILLINGS, AND OTHER SUPPORT:

4.1 It is agreed to and understood by all parties that, subject to Article 4.3 and 12, and notwithstanding anything else to the contrary in this Agreement, the total costs to the Sponsor relating to the Project hereunder shall be no greater than $600,000. The parties acknowledge that any budget categories that may be set forth in the description of the Project are estimates only and that changes from category to category may be made at the Research Organization's discretion. No invoice shall be issued to the Sponsor by the Research Organization. Payment in advance shall be made by the Sponsor according to the following schedule:

Payment Due Date	Amount Due
On execution of this Agreement	$ 75,000.00
December 29, 2000	$ 75,000.00
March 30, 2001	$ 75,000.00
June 29, 2001	$ 75,000.00
September 28, 2001	$ 75,000.00
December 31, 2001	$ 75,000.00
March 28, 2002	$ 75,000.00
June 28, 2002	$ 75,000.00
Total:	**$600,000.00**

The Research Organization reserves the right to suspend work on the Project or to terminate the Project and this Agreement by delivering written notice of same to the Sponsor if the Sponsor fails to make the aforementioned payments within 30 days of the dates herein specified.

4.2 The Research Organization shall retain title to any equipment purchased with funds provided by the Sponsor under this Agreement.

4.3 In the event of early termination of this Agreement, the Sponsor shall pay all costs and liabilities relating to the Project which have been incurred by the Research Organization as of the date of receipt of notice of such termination. For greater certainty, such costs and liabilities shall include all non-cancellable obligations including payments in lieu of reasonable notice for technicians, graduate students, and other staff assigned to the Project.

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5.0 PUBLICITY:

5.1 Notwithstanding anything to the contrary in this Agreement, the Research Organization may disclose the identity of the Sponsor, the title of the Project, the name of the Investigator, the Contract Period, and the amount of funding being provided by the Sponsor in support of the Project. Further, the Sponsor and any sublicensee thereof may (subject to the confidentiality provisions of Article 6) disclose the existence and nature of this Agreement, the amount of funding being provided and the nature of the Project without the need for the consent of the Research Organization. Except as provided by the foregoing, neither party may use the name of the other, nor of any member of the other's Project staff, in any publicity, advertising, or news release, unless required to do so by law, without the prior written approval of an authorized representative of the other, such approval not to be unreasonably withheld.

6.0 CONFIDENTIALITY:

6.1 The Recipient shall not use the Confidential Information provided to it by the Provider, directly or indirectly, for any purpose other than as specifically set forth in this Agreement. Without limiting the generality of the foregoing, the Recipient shall not use, manufacture, or sell the Provider's Confidential Information or any device or means incorporating any of the Provider's Confidential Information, and shall not use any of the Provider's Confidential Information as the basis for the design or creation of any device or means.

6.2 The Recipient shall keep and use all of the Provider's Confidential Information in confidence and shall not disclose any part of the Provider's Confidential Information to any person, firm, corporation, or other entity with the exception that the Sponsor may disclose Confidential Information provided to it from the Research Organization to the Sponsor's sublicensees under the License Agreement on terms consistent with the confidentiality restrictions set forth in this Collaborative Research Agreement and the License Agreement. In the event that there is any inconsistency between the confidentiality provisions in this Agreement and those provided for in the License Agreement, the terms of this Agreement will prevail with respect to any Confidential Information under the terms of this Agreement.

6.3 Subject to Article 5.1, the Sponsor requires of the Research Organization, and the Research Organization agrees insofar as it may be permitted to do so at law, that this Agreement, and each part of it, is confidential and shall not be disclosed to third parties, as the Sponsor claims that such disclosure would or could reveal commercial, scientific or technical information and would significantly harm the Sponsor's competitive position.

6.4 Notwithstanding any termination or expiration of this Agreement, the obligations of confidentiality set forth in this Article 6 shall survive and continue to be binding upon the Recipient, its successors, and assigns until three (3) years after such termination or expiration.

7.0 PUBLICATIONS:

7.1 The Sponsor acknowledges that the policies of the Research Organization require that the results of the Project be publishable, subject to Article 6. The parties therefore agree that researchers engaged in the Project shall not be restricted from presenting at symposia, national, or regional professional meetings, or from publishing in abstracts, journals, theses, or dissertations, or otherwise, whether in printed or in electronic media, methods and results of the Project, provided however that:

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(a) the Research Organization provides the Sponsor with copies of any proposed publication or presentation at least 45 days in advance of the submission of such proposed publication or presentation to a journal, editor, or other third party; and

(b) the Sponsor has not, within 30 days after receipt of said copies, objected in writing to such proposed presentation or proposed publication in accordance with Article 7.2 of this Agreement.

7.2 The Sponsor may object to a proposed presentation or proposed publication on the grounds that it contains Confidential Information that was disclosed to the Research Organization by the Sponsor or on the grounds that it discloses patentable subject matter which needs protection. In the event that the Sponsor makes such objection on the former ground, the Research Organization shall ensure that its researchers remove such Confidential Information immediately from the proposed presentation or publication, after which the Research Organization and its researchers may proceed with said presentation or publication. In the event that the Sponsor makes such an objection on the latter ground, it shall be deemed to be a direction to the Research Organization to file a patent application pursuant to Article 8.4, and the Research Organization shall ensure that its researchers refrain from making such publication or presentation until Research Organization has filed one or more patent applications with one or more patent offices directed to such patentable subject matter, or until 3 months have elapsed from date of receipt of such written objection from the Sponsor by the Research Organization, whichever is sooner, after which the Research Organization and its researchers may proceed with said presentation or publication. For greater certainty, a provisional patent application shall be considered to be a patent application in the United States of America for the purposes of this Agreement.

8.0 INTELLECTUAL PROPERTY:

8.1 The parties acknowledge and agree that all rights and title to Research Organization Intellectual Property shall belong to the Research Organization.

8.2 The parties acknowledge and agree that all rights and title to Sponsor Intellectual Property shall belong to the Sponsor.

8.3 Notwithstanding Article 8.1, the parties acknowledge and agree that, as between the parties, all rights and title to Joint Intellectual Property shall belong jointly to the Research Organization and the Sponsor. Notwithstanding the applicable patent or other intellectual property laws in any jurisdiction, none of the parties may commercially exploit any Joint Intellectual Property except as specifically provided for in Article 9.3.

8.4 The Research Organization will promptly notify Sponsor of any Research Organization Intellectual Property. The parties will promptly notify one another of any Joint Intellectual Property. The Sponsor may direct that one or more patent applications be filed in respect of such Research Organization Intellectual Property or Joint Intellectual Property, as the case may be, in which case the Research Organization shall promptly prepare, file, and prosecute such patent applications in such jurisdictions as the Sponsor directs in the name of

the Research Organization in the case of Research Organization Intellectual Property and in the joint names of the Research Organization and the Sponsor in the case of Joint Intellectual Property. Where the parties have agreed upon a license in accordance with Article 9.2 or 9.4, as applicable, the Sponsor shall bear all costs incurred in connection with the preparation, filing, prosecution, and maintenance of such patent applications and shall cooperate with the Research Organization to assure that such patent applications cover, to the best of the Sponsor's knowledge, all items of commercial interest and importance. While the Research Organization shall be responsible for making final decisions regarding the scope and content of such patent applications and the prosecution thereof, the Sponsor shall be given an opportunity to review and provide input thereto. The Research Organization shall keep the Sponsor advised as to all developments with respect to such applications and shall promptly supply the Sponsor with copies of all papers received and filed in connection with the prosecution thereof in sufficient time for the Sponsor to comment thereon

8.5 If the Research Organization wishes to obtain patent protection in respect of Research Organization Intellectual Property and/or Joint Intellectual Property over and above that for which the Sponsor wishes to provide its financial support pursuant to Article 8.4, the Research Organization shall be free to file or continue prosecution or maintain any such applications and to maintain any protection issuing thereon at its own expense.

9.0 GRANT OF RIGHTS:

9.1 The Research Organization grants the Sponsor (subject to the rights and consent, as and if applicable, of the Academic Hospital at the University of Amsterdam, Amsterdam Molecular Therapeutics B.V., and/or [†]) the option to obtain an exclusive royalty-bearing world-wide license to use or otherwise exploit the Research Organization's rights to any Research Organization Intellectual Property subject to terms and conditions determined in accordance with Article 9.2. Said option shall subsist with respect to each item of Research Organization Intellectual Property for a period of 6 months after said item has been disclosed in writing by the Research Organization to the Sponsor and may be exercised within this period by the Sponsor delivering written notice of same to the Research Organization.

9.2 If the Sponsor exercises its option pursuant to Article 9.1, the parties shall negotiate in good faith to determine the specific terms and conditions on which the license shall be granted by the Research Organization (and the Academic Hospital at the University of Amsterdam, Amsterdam Molecular B.V., and/or [†], as applicable and subject to their consent) to the Sponsor according to the following terms and ranges: License fee in the range of [†] and royalties in the range of either (i) [†] or (ii) [†]. If the parties are unable to agree upon such specific terms and conditions within a period of 6 months after the date when the Sponsor exercised its option, the Sponsor shall have the right to have the terms and conditions which are still in issue determined by an arbitrator in accordance with Article 14. Said arbitrator shall be required to determine such outstanding terms and conditions:

(a) Subject to this Article 9.2, in accordance with generally accepted industry standards where such terms and conditions relate purely to financial matters such as minimum annual royalty amounts, percentage royalty rates, and performance requirements; and

(b) Substantially in accordance with the then current licensing practices of the Research Organization in all other matters including, without limiting the generality of the foregoing, matters of indemnification, insurance, confidentiality, use of trade-marks or names of Research Organization personnel, and disclaimer of warranty.

9.3 Each of the parties hereto grants the other the option to obtain a royalty-bearing license to use or otherwise exploit Joint Intellectual Property subject to terms and conditions determined in accordance with Article 9.4. Said option shall subsist with respect to each item of Joint Intellectual Property for a period of 6 months after said item has been disclosed in writing by one party to the other and may be exercised within this period by the exercising party delivering written notice of same to the other.

9.4 If either one of the parties exercises its option pursuant to Article 9.3, the parties shall negotiate in good faith to determine the specific terms and conditions on which the license shall be granted to the exercising party according to the terms and ranges set forth in Article 9.2. If the parties are unable to agree upon such specific terms and conditions within a period of 6 months after the date when the option was exercised, either party shall have the right to have the terms and conditions which are still in issue determined by an arbitrator in accordance with Article 14. Said arbitrator shall be required to determine such outstanding terms and conditions:

(a) Subject to this Article 9.4, in accordance with generally accepted industry standards where such terms and conditions relate purely to financial matters such as minimum annual royalty amounts, and performance requirements except that the applicable royalty rate to be paid by the exercising party to the other shall be determined by ascertaining what would be a fair market royalty rate if the applicable Joint Intellectual Property was owned in its entirety by one party and was being licensed to an independent, arms-length, third party and then dividing this figure equally by the number of joint owners of the applicable Joint Intellectual Property; and

(b) Substantially in accordance with the then current licensing practices of the Research Organization in all other matters including, without limiting the generality of the foregoing, matters of indemnification, insurance, confidentiality, use of trade-marks or names of Research Organization personnel, and disclaimer of warranty.

9.5 Subject to the Research Organization’s compliance with Article 6, the Sponsor hereby grants the Research Organization a non-exclusive, royalty-free license in perpetuity to use Sponsor Intellectual Property and Joint Intellectual Property but only for academic and research purposes, and not for any commercial purposes whatsoever. Except as expressly provided for above, the Research Organization may not use or license any Joint Intellectual Property without the express prior written consent of the Sponsor.

9.6 Notwithstanding Articles 6, 9.1 and 9.3 of this Agreement, the Sponsor (and the Sponsor’s sublicensees or sub-sublicensees, as the case may be) shall have access to, and the right to use, non-patentable research data and reports generated during the performance of the Project, for the limited purpose of fulfilling regulatory requirements in the research and development process relating to the technology that has been licensed to the Sponsor under the License Agreement.

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10.0 TERM AND TERMINATION:

10.1 This Agreement shall be deemed to have come into force upon the beginning of the Contract Period and shall continue in effect for the full duration of the Contract Period unless sooner terminated in accordance with the provisions of this Article. The parties hereto may, however, extend the term of this Agreement for additional periods as desired under mutually agreeable terms and conditions which the parties reduce to writing and sign. Either party may terminate this agreement upon ninety (90) days prior written notice to the other.

10.2 In the event that either party hereto shall commit any breach of or default in any of the terms or conditions of this Agreement, and also shall fail to remedy such default or breach within thirty (30) days after receipt of written notice thereof from the other party hereto, the party giving notice may, at its option and in addition to any other remedies which it may have at law or in equity, terminate this Agreement by sending notice of termination in writing to the other party to such effect and such termination shall be effective as of the date of the receipt of such notice.

10.3 Termination of this Agreement by either party for any reason shall not affect the rights and obligations of the parties accrued prior to the effective date of termination of this Agreement pursuant to Articles 8 and 9. No, termination of this Agreement, however effectuated, shall release the parties hereto from their rights and obligations under Articles 4.3, 5, 6, 10.4, or 12.

10.4 Forthwith upon the termination of this Agreement, the Recipient shall cease to use the Provider's Confidential Information in any manner whatsoever and upon the written request of the Provider shall forthwith deliver up to the Provider all of the Provider's Confidential Information in the Recipient's possession or control, together with a certificate certifying that no copies have been made or retained.

11.0 DISCLAIMER OF WARRANTY:

11.1 The Research Organization makes no representations or warranties, either express or implied, with respect to the data or other results arising from the Project or with respect to any Confidential Information it may disclose to the Sponsor. The Research Organization specifically disclaims any implied warranty of non-infringement or merchantability or fitness for a particular purpose and shall in no event be liable for any loss of profits, be they direct, consequential, incidental, or special or other similar or like damages arising from any defect, error or failure to perform, even if the Research Organization has been advised of the possibility of such damages. The Sponsor hereby acknowledges that the Project is of an experimental and exploratory nature, that no particular results can be guaranteed, and that it has been advised by the Research Organization to undertake its own due diligence with respect to all matters arising from this Agreement.

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12.0 INDEMNITY:

12.1 The Sponsor hereby indemnifies, holds harmless and defends the Research Organization, its Board of Governors, directors, officers, employees, faculty, students, invitees, and agents against any and all claims (including all legal fees and disbursements incurred in association therewith) arising out of the receipt or use by the Sponsor of any of the Research Organization's Confidential Information, the Research Organization Intellectual Property, the Joint Intellectual Property, the Sponsor Intellectual Property, or any data or other results arising from the Project including, without limiting the generality of the foregoing, any damages or losses, consequential or otherwise, arising from or out of same, howsoever the same may arise.

13.0 INSURANCE:

13.1 The parties acknowledge that the Research Organization has adequate liability insurance applicable to its officers, employees, and agents while acting within the scope of their employment by the Research Organization, and that the Research Organization has no liability insurance policy as such that can extend protection to any other person. Therefore, subject to Article 12, each party hereby assumes any risks of personal injury and property damage attributable to the negligent acts or omissions of that party and its officers, employees, and agents.

14.0 GOVERNING LAW AND ARBITRATION:

14.1 This Agreement shall be governed by and construed in accordance with the laws of the Province of British Columbia and the laws of Canada in force therein without regard to its conflict of law rules. All parties agree that by executing this Agreement they have attomed to the jurisdiction of the Supreme Court of British Columbia. Subject to Article 14.2, the Supreme Court of British Columbia shall have exclusive jurisdiction over this Agreement.

14.2 In the event of any dispute arising between the parties concerning this Agreement, its enforceability, or its interpretation, said dispute shall be settled by a single arbitrator appointed pursuant to the provisions of the *International Commercial Arbitration Act* of British Columbia, or any successor legislation then in force. The place of arbitration shall be Vancouver, British Columbia, Canada and the language to be used in the arbitration proceedings shall be English. Notwithstanding the foregoing, either party may apply to a court of competent jurisdiction for interim protection such as, by way of example, an interim injunction.

15.0 ASSIGNMENT:

15.1 Except as specifically provided by Article 15.2, this Agreement shall not be assigned by any party without the prior written consent of the others, which consent shall not be unreasonably withheld.

15.2 The Sponsor may assign its rights and obligations pursuant to this Agreement to any majority stockholder of the Sponsor and/or any subsidiary in which the Sponsor is a majority stockholder and/or to a purchaser of all or substantially all of the assets of the Sponsor, provided that the Sponsor notifies the Research Organization in writing in advance of such assignment and further provided that the assignee enter into a written agreement with the Research Organization pursuant to which the assignee agrees to assume responsibility for all of the Sponsor's obligations pursuant to this Agreement.

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16.0 NOTICES:

16.1 All notices or other documents that either of the parties hereto are required or may desire to deliver to the other party hereto may be delivered only by personal delivery or by registered or certified mail, or fax, all postage and other charges prepaid, at the address for such party set forth below or at such other address as that party may hereinafter designate in writing to the other. Any notice personally delivered or sent by fax shall be deemed to have been given or received at the time of delivery, or transmission.

Sponsor:	President Xenon Genetics Inc. 100 - 2386 East Mall Vancouver, British Columbia V6T 1Z3 Telephone: (604) 221-8478 Fax: (604) 221-8423
Research Organization:	The Director The University of British Columbia University - Industry Liaison Office I.R.C. Room 3312194 Health Sciences Mall Vancouver, British Columbia V6T 1Z3 Telephone: (604) 822-8580 Fax: (604) 822-8589

16.2 Questions or queries of a scientific nature or regarding financial matters may be directed by the Sponsor to the Research Organization through the following contacts:

Technical Matters:	Dr. Michael Hayden Department of Medical Genetics The University of British Columbia Center for Molecular Medicine and Therapeutics Vancouver, British Columbia Telephone:(604) 875-3535 Telecopier:(604) 875-3819
Financial Matters:	Ms. Claudia Nadalini Office of Financial Services University of British Columbia General Services Administration Building 2075 Wesbrook Mall Vancouver, British Columbia V6T 1Z1 Telephone:(604) 822-2321 Telecopier:(604) 822-2417

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17.0 NO CONSULTING

17.1 The parties hereto acknowledge that, Dr. Michael Hayden *("**Dr. Hayden**")* has an appointment within the Research Organization and is also Chief Scientific Officer of the Sponsor and that Dr. Michael Hayden will be required to comply with the policies of the Research Organization relating to conflicts of interest. Without limiting the generality of the foregoing, the Sponsor and Dr. Hayden acknowledge and agree that Dr. Hayden has been engaged by the Research Organization as the Investigator in connection with the Project described in Appendix *"**A**"* to this Agreement, and that Dr. Hayden will not be engaged or retained as a consultant by the Sponsor or any other party in connection with the Project or research related to the Project.

18.0 GENERAL:

18.1 The appendices to this Agreement together with the terms and conditions contained within this Agreement constitute the entire understanding between the parties hereto and no modifications hereof shall be binding unless executed in writing by the parties hereto. The appendices will be binding upon the parties hereto except to the extent that they may conflict with the terms and conditions contained within this Agreement itself, in which case the terms and conditions of this Agreement shall govern.

18.2 In the event that any part, section, clause, paragraph or subparagraph of this Agreement shall be held to be indefinite, invalid, illegal or otherwise voidable or unenforceable, the entire agreement shall not fail on account thereof, and the balance of the Agreement shall continue in full force and effect.

18.3 No condoning, excusing or overlooking by either party of any default or breach by the other party in respect of any terms of this Agreement shall operate as a waiver of such party's rights under this Agreement in respect of any continuing or subsequent default or breach, and no waiver shall be inferred from or implied by anything done or omitted by such party, save only an express waiver in writing.

18.4 No exercise of a specific right or remedy by any party precludes it from or prejudices it in exercising another right or pursuing another remedy or maintaining an action to which it may otherwise be entitled either at law or in equity.

18.5 In the event of a conflict arising between the interpretation of this Agreement and the License Agreement, the terms of the License Agreement will prevail.

IN WITNESS WHEREOF the parties hereto have hereunto executed this Agreement effective as of the beginning of the Contract Period, regardless of the date of execution.

Signed for and on behalf of	)
XENON GENETICS INC.	)
by its authorized signatories:	)
	)
	)
_____	
Authorized Signatory	)
	)
_____	
Authorized Signatory	)
	)

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

Signed for and on behalf of)
THE UNIVERSITY OF BRITISH COLUMBIA)
by its authorized signatories:)
)
)
_____)
Authorized Signatory)
)
)
_____)
Authorized Signatory

I have read and understood the foregoing Agreement and understand my responsibilities as the Investigator, and in particular acknowledge and agree with the restrictions on my ability to be retained or engaged as a consultant as set out in Article 17.1 herein:

_____
Name: Dr. Michael Hayden
Department: UBC Medical Genetics Department

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APPENDIX "A"
STATEMENT OF WORK
PROJECT DESCRIPTION

LPL Gene Therapy for LPL Deficiency

1. PROJECT OBJECTIVE

AMT is developing an adeno-associated virus (MV) gene therapy strategy as an orphan drug to enhance triglyceride metabolism in genetically deficient LPL patients. When successful, this gene therapy approach has the potential to be used in large patient populations by correcting the lipoprotein phenotype in coronary artery disease and myocardial ischemia. This project is directed at the development of an adeno-associated virus (AAV), gene-based strategy for the replacement and/or enhancement of Lipoprotein Lipase (LPL) gene function in humans. The specific objectives of this gene targeting approach is to enhance intravascular triglyceride (Tg) metabolism (or in other words, lipid breakdown) in patients who have severely elevated blood Tg's due to a genetic deficiency of LPL; these patient carry a high health risk of both morbidity and mortality, and occur in significant numbers in Western Europe, Canada, the US and South Africa.

2. PROJECT DESCRIPTION

2.1. Preclinical proof of principle studies

Objectives:

- Generate and test MV vector expressing LPL
- Demonstrating proof of principle
- Evaluate gene expression

For the proof of principle study, [†].

Study design

1. [†].
2. [†]
3. [†]
    a. [†]:
        - [†]
        - [†]
        - [†].

        [†].
    b. [†].

        [†].

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Anticipated time schedule

1. [†] study
    a. Start experiment: [†]
    b. End of experiment: [†]
2. [†] study
    a. Start experiment: [†]
    b. End of experiment: [†]

Committed number of FTE's fully dedicated to this project [†]

2.2. Preclinical [†] studies

Objectives:

- Evaluate safety
- Evaluate immune response
- Evaluate gene expression
- Evaluate delivery site
- Evaluate distribution of vector to various tissues (biodistribution)
- Selection of product candidate for clinical development
- Identify doses for clinical trials
- Filing of regulatory submission to commence clinical trials
- Obtain regulatory approval to start clinical trial

[†].

[†].

Anticipated time schedule

Start: [†]

Budget

	Annual Budget [†] years	University Overhead @ [†]%"
Salaries, Equipment and Consumables		
Project Leader	$ [†]	$ [†]
Benefits [†]	[†]	[†]
Post Doctoral Fellow	[†]	[†]
Benefits [†]	[†]	[†]
[†]	[†]	[†]
Benefits [†]	[†]	[†]
Reagents and routines (consumables)($[†] / person / month)	[†]	[†]
Minor Equipment	[†]	—

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Costs for animal experiments		
[†] study *: [†]	[†]	[†]
[†] study **: ([†]	[†]	[†]
Subtotal	[†]	[†]
“TOTAL ANNUAL BUDGET:	[†]	

* [†].
** [†].

Annex 2

LICENSE AGREEMENT

BETWEEN:

THE UNIVERSITY OF BRITISH COLUMBIA, a corporation continued under the *University Act* of British Columbia and having its administrative offices at 2075 Wesbrook Mall, in the City of Vancouver, in the Province of British Columbia, V6T 1W5

(the "***University***")

AND:

XENON GENETICS INC., a corporation continued under the laws of Canada, and having its administrative offices at Suite 100 - 2386 East Mall, Vancouver, British Columbia, V6T 1Z3

(the "***Licensee***")

WHEREAS:

A. The University has been engaged in research during the course of which it has invented, developed and/or acquired certain technology identified in UBC Invention Disclosure File #UBC 94-061, entitled *"Lipofipase Mutation 291, Implication for Coronary Artery Disease"*, and File #UBC 91-003, entitled *"Mutation in Human Lipoprotein Lipase Gene which causes Type 1 Hyperlipoproteinemia";*

B. [†] has invented, developed and/or acquired certain technology which may have common subject matter with certain technology invented, developed and/or acquired by the University, and identified in UBC Invention Disclosure File # UBC 99-082, entitled *"Recombinant Viruses Preparation and use thereof in Gene Therapy";*

C. The University has been jointly engaged in research with the Academic Hospital at the University of Amsterdam *("**AMC**")* during the course of which they have jointly invented, developed and/or acquired certain technology identified in UBC Invention Disclosure File # UBC 00039, entitled *"Mutation 447";*

D. The research done at the University with respect to the above referenced technologies was undertaken by Dr. Michael Hayden who is an employee of the University engaged in a number of research projects and a founder and chief scientific officer of the Licensee;

E. [†].

F. The University is desirous of entering into this agreement (the *"**Agreement**") with* the objective of furthering society's use of its advanced technology, and to generate further research in a manner consistent with its status as a non-profit, tax exempt educational institution; and

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G. Subject to the terms and conditions hereinafter set out, the Licensee is desirous of the University granting a license to the Licensee to use or cause to be used the University's interest in such technology to manufacture, distribute, market, sell and/or license or sublicense products and services derived or developed from such technology.

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the premises and of the mutual covenants herein set forth, the parties hereto have covenanted and agreed as follows:

1.0 DEFINITIONS:

1.1. In this Agreement, unless a contrary intention appears, the following words and phrases shall mean:

(a) *"**Accounting**":* an accounting statement setting out in detail how the amount of Revenue was determined;

(b) *"**Affiliated Company**"* or *"**Affiliated Companies**":* two or more corporations where the relationship between them is one in which one of them is a subsidiary of the other, or both are subsidiaries of the same corporation, or fifty percent (50%) or more of the voting shares of each of them is owned or controlled by the same person, corporation or other legal entity;

(c) *"**Collaborative Research Agreement**":* the Collaborative Research Agreement dated August 1, 2000 between the University and the Licensee, which contemplates the performance of a research project entitled *"LPL* Gene *Therapy for LPL Deficiency"*,

(d) *"**Confidential Information**":* any part of the Information which is designated by either party (the *"**Disclosing Party**")* as confidential, whether orally or in writing but excluding any part of the Information:

(i) possessed by the receiving party prior to receipt from the Disclosing Party, other than through prior disclosure by the Disclosing Party, as evidenced by the receiving party's business records;

(ii) published or available to the general public otherwise than through a breach of this Agreement;

(iii) obtained by the receiving party from a third party with a valid right to disclose it, provided that said third party is not under a confidentiality obligation to the Disclosing Party; or

(iv) independently developed by employees, agents or consultants of the receiving party who had no knowledge of or access to the Disclosing Party's Information as evidenced by the receiving party's business records;

(e) *"**Date of Commencement**"* or *"**Commencement Date":*** this Agreement will be deemed to have come into force on the Date of Commencement which shall be August 1, 2000, and shall be read and construed accordingly;

(f) *"**Effective Date of Termination**":* the date on which this Agreement is terminated pursuant to Article 18;

(g) *"**Field of Use**":* gene therapy being [†].

(h) *"**Xenon Improvements**":* improvements, variations, updates, modifications, and enhancements which relate to the Technology made solely by the Licensee or any sublicensees of the Licensee at any time after the Commencement Date that cannot be practised without infringing the claims of the Patents;

(i) *"**UBC Improvements**":* improvements, variations, updates, modifications, and enhancements which relate to the Technology made solely by the University at any time after the Commencement Date that cannot be practised without infringing the claims of the Patents;

(j) *"**Joint Improvements**":* improvements, variations, updates, modifications, and enhancements which relate to the Technology made jointly by the University and the Licensee or the University and any sublicensees of the Licensee at any time after the Commencement Date that cannot be practised without infringing the claims of the Patents;

(k) *"**Improvements**":* collectively the UBC Improvements, the Xenon Improvements and the Joint Improvements;

(l) *"**Information**":* any and all Technology and any and all Improvements, the terms and conditions of this Agreement and any and all oral, written, electronic or other communications and other information disclosed or provided by the parties including any and all analyses or conclusions drawn or derived therefrom regarding this Agreement and information developed or disclosed hereunder, or any party's raw materials, processes, formulations, analytical procedures, methodologies, products, samples and specimens or functions;

(m) *"**Patents**":* collectively the patents listed in Schedule *"**A**"*, including any patents or patent applications that may be added to Schedule *"**A**"* from time to time, and any counterparts, Continuation-ln-Part, renewals, divisionals, reissues, corresponding international patent applications, continuations and any patents resulting therefrom. For greater certainty the Patents and Patent applications as herein defined shall include, any and all Patents or Patent Applications arising from, or relating to Improvements, including Improvements that result from the Collaborative Research Agreement between the parties, which Patents or Patent applications shall be added to Schedule *"**A**";*

(n) *"**Product(s)**":* goods manufactured in connection with the use of all or some of the Technology and/or any Improvements;

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(o) "***Revenue":[†]***, less the following deductions to the extent included in the amounts invoiced and thereafter actually allowed and taken:

(i) [†],

(ii) [†],

(iii) [†],

(iv) [†], and

(v) [†].

Where any Revenue is derived from a country other than Canada it shall be converted to the equivalent in Canadian dollars on the date the Licensee is deemed to have received such Revenue pursuant to the terms hereof at the rate of exchange set by the Bank of Montreal for buying such currency. The amount of Canadian dollars pursuant to such conversion shall be included in the Revenue;

(p) "***Royalty Due Dates***": the last working day of March, June, September and December of each and every year during which this Agreement remains in full force and effect;

(q) "***Sublicensing Revenue***": [†], but excluding:

(i) [†];

(ii) [†];

(iii) research fees received by the Licensee in reimbursement for the actual costs of research and development undertaken by the Licensee pursuant to a written research plan.

Where any Sublicensing Revenue is derived from a country other than Canada it shall be converted to the equivalent in Canadian dollars on the date the Licensee is deemed to have received such Sublicensing Revenue pursuant to the terms hereof at the rate of, exchange set by the Bank of Montreal for buying such currency. The amount of Canadian dollars pursuant to such conversion shall be included in the Sublicensing Revenue;

(r) "***Technology***": any and all knowledge, know-how and/or technique or techniques invented, developed and/or acquired, prior to the Date of Commencement by the University relating to, and including the technology described in Schedule "***A***" hereto, as amended from time to time, including, without limitation the Patents, and collectively the University's interest in the UBC Technology, the UBC - [†] Technology and the UBC - Amsterdam Technology (as hereinafter defined in Article 2.1) and all research, data, specifications, instructions, manuals, papers or other materials of any nature whatsoever, whether written or otherwise, relating to same; and

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(s) *"**UBC Trade-marks**":* any mark, trade-mark, service mark, logo, insignia, seal, design, symbol or device used by the University in any manner whatsoever.

2.0 PROPERTY RIGHTS IN AND TO THE TECHNOLOGY:

2.1. The parties hereto hereby acknowledge and agree that:

(a) Dr. Michael Hayden has assigned his rights to the Technology and any Improvements to the University;

(b) the University owns any and all right, title and interest in and to the technology identified in UBC Invention Disclosure File # UBC 94-061, entitled *"Lipolipase Mutation 291, Implication for Coronary Artery Disease"*, and File # UBC 91-003, entitled *"Mutation in Human Lipoprotein Lipase Gene which causes Type 1 Hyperlipoproteinemia"* as well as any and all UBC Improvements (the *"**UBC Technology**");*

(c) [†] has developed or acquired certain technology which has common subject matter with certain technology invented, developed and/or acquired by the University, and the University and [†] are named as joint owners within the United States of the technology identified in UBC Invention Disclosure File # UBC 99-082, entitled *"Recombinant Viruses Preparation and use thereof in Gene Therapy"* (the *"**UBC -[†] Technology**");*

(d) the University and AMC jointly own the technology identified in UBC Invention Disclosure File # UBC 00-039, entitled *"Mutation 447"* (the *"**UBC - Amsterdam Technology**"),*

(e) the University and the Licensee, subject to the terms of this Agreement jointly own all Joint Improvements, and provided that notwithstanding the applicable patent or other intellectual property laws of any jurisdiction both the University and the Licensee shall only use and commercially exploit any Joint Improvements in accordance with the terms of this Agreement; and

(f) the Licensee, subject to the terms of this Agreement, owns any all right, title and interest in and to the Xenon Improvements.

2.2. The Parties shall, on request, enter into such further agreements and execute any and all documents as may be required to ensure that ownership of the Technology, and any Improvements vest with, or remain with, the parties as set out in Article 2.1.

3.0 GRANT OF LICENSE:

3.1. In consideration of the license fees, milestone payments and royalty payments reserved herein, and the covenants on the part of the Licensee contained herein, the University hereby grants to the Licensee within the Field of Use:

(a) a worldwide exclusive license to use and sublicense the UBC Technology, any UBC Improvements or any Joint Improvements, and any Patents related thereto, including the right to manufacture, distribute, and sell Products and provide services on the terms and conditions hereinafter set forth during the term of this Agreement;

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(b) a license of the University's rights to the UBC - [†] Technology and any UBC Improvements or Joint Improvements and any Patents related thereto, including the right to use and sublicense the University's rights in the UBC - [†] Technology and any UBC Improvements or Joint Improvements thereto, and to manufacture, distribute, and sell Products and provide services on the terms and conditions hereinafter set forth during the term of this Agreement. The University acknowledges and agrees that it shall not license within the Field of Use any of the University's rights to the UBC - [†] Technology or any UBC Improvements or Joint Improvements thereto to any entity other than the Licensee for the duration of the term of this Agreement;

(c) a worldwide co-exclusive license together with Amsterdam Molecular Therapeutics B.V. *("**AMT**")* of the University's rights to the UBC - Amsterdam Technology and any UBC Improvements or Joint Improvements and any Patents related thereto, including the right to use and sublicense the University's rights to the UBC - Amsterdam Technology and any UBC Improvements or Joint Improvements thereto, and to manufacture, distribute, and sell Products and provide services on the terms and conditions hereinafter set forth during the term of this Agreement The Licensee acknowledges and agrees that AMC has granted a worldwide co-exclusive license to AMT to use and sublicense the UBC - Amsterdam Technology. The University acknowledges and agrees that it shall not license within the Field of Use any of the University's rights to the UBC - Amsterdam Technology or any UBC Improvements or Joint Improvements thereto to any entity other than the Licensee for the duration of the term of this Agreement;

3.2. The grant of the license:

(a) set out in Article 3.1(b) is made expressly subject to all of the rights which [†] has acquired to the UBC - [†] Technology. The Licensee hereby acknowledges that the use, practice, exploitation and commercialization of any rights to the UBC - [†] Technology may be subject to the consent of [†], and that it shall be the Licensee's sole responsibility to obtain such consent from [†];

(b) set out in Article 3.1(c) is expressly made subject to the conditions precedent that the written consent of AMC be obtained by the University prior to the grant of such a co-exclusive license to the Licensee.

In the event the University is unable to obtain the consent referred to in Article 3.2(b), the grant of license by the University to the Licensee herein shall be limited to the grant of license referred to in Article 3.1(a) and (b).

3.3. The licenses granted herein are personal to the Licensee and are not granted to any Affiliated Company or Affiliated Companies, subject to the right of the Licensee to sublicense as set out herein.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

3.4. The Licensee shall not cross-license the Technology or any UBC Improvements or Joint Improvements without the prior written consent of the University.

3.5. Notwithstanding Article 3.1, and subject to Article 10.6 herein, the parties acknowledge and agree that the University may use the Technology and any Improvements (including UBC Improvements, Joint Improvements and Xenon Improvements) without charge in any manner whatsoever for research, scholarly publication, educational or other non-commercial uses. Except as expressly provided for above, the University may not use or license any Joint Improvements without the express, prior written consent of the Licensee.

4.0 SUBLICENSING:

4.1. The Licensee shall have the right to grant sublicenses to Affiliated Companies and other third parties with respect to the Technology and any Improvements with the prior written consent of the University, such consent not to be unreasonably withheld. The Licensee shall not be obligated to obtain the University's consent to the granting of a sublicense if the proposed sublicensee has a market capitalization in excess of CAN. $[†] at the time of the granting of the sublicense. Further, the University, subject to a full legal review and approval of the terms of such sublicense agreement and review of the performance terms in accordance with Article 11.3, hereby expressly consents to the Licensee granting a sublicense to AMT. The Licensee will furnish the University with a copy of each sublicense granted within 30 days after execution. The Licensee shall cause each sublicensee to indemnify the University on the same terms and conditions as are contained in Article 9.1 and which indemnity shall extend to cover any sub-sublicenses granted by such sublicensee.

4.2. Except as hereinafter provided, any sublicense granted by the Licensee shall be personal to the sublicensee and shall not be assignable without the prior written consent of the University, such consent not to be unreasonably withheld. A sublicensee may grant a further sub-sublicense to a third party for the purpose of developing, marketing, selling, manufacturing or distributing Products with the prior written consent of the University, such consent not to be unreasonably withheld. A sublicensee shall not be obligated to obtain the University's consent to the granting of a sub-sublicense if the proposed sub-sublicensee has a market capitalization in excess of CAN. $[†] at the time of the granting of the sub-sublicense. The sublicensee shall furnish the University with a copy of such sub-sublicense granted within 30 days after execution. A sublicense can be assigned without the consent of the University to an Affiliated Company of the sublicensee or as part of a merger, acquisition or other business combination in which all or substantially all of the assets of the sublicensee are transferred. All sublicenses and sub-sublicensees shall contain covenants by the sublicensee or sub-sublicensees to observe and perform the terms and conditions contained in this Agreement, to the extent that the same are applicable.

4.3. Upon execution of a sublicense with AMT, AMT may register such sublicense with the relevant patent authorities, in those jurisdictions in which AMT carries on business and/or has its chief place of business. The University will provide reasonable assistance to AMT with respect to such registrations, provided that all reasonable costs incurred by the University in association with such registrations, including all legal expenses, shall be paid for by AMT, or the Licensee in the event of any default in payment by AMT. The University will, on request by the Licensee, endeavour to provide an estimate of such costs.

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5.0 ROYALTIES:

5.1. In consideration of the license granted hereunder, the Licensee shall pay to the University a royalty comprised of:

(a) —% of the Revenue, and

(b) —% of the Sublicensing Revenue.

For clarification, Sublicensing Revenue shall be exclusive of Revenue, such that in no event shall the Licensee owe royalties to the University under both of Articles 5.1(a) and 5.1(b) in respect of any given amount of revenue.

5.2. If commercial development by the Licensee of a Product or Products incorporating the Technology or any Improvements is not possible without licensing other technology from an arms length third party to be used in combination with the Technology or any Improvements, then[†]:

- [†] and
- [†].

[†]

5.3. The royalty shall become due and payable within [†] days of each respective Royalty Due Date and shall be calculated with respect to the Revenue and the Sublicensing Revenue in the three month period immediately preceding the applicable Royalty Due Date.

5.4. All payments of royalties made by the Licensee to the University hereunder shall be made in Canadian dollars without any reduction or deduction of any nature or kind whatsoever, except as may be prescribed by Canadian law.

5.5. Products shall be deemed to have been sold by the Licensee and included in the Revenue when invoiced, or if not invoiced, then when delivered, shipped, or paid for, whichever is the first. Sublicensing Revenue shall be deemed to have been received by the Licensee with respect to each of its sublicensees when such consideration is actually received by the Licensee from its sublicensees.

5.6. Any transaction, disposition, or other dealing involving the Technology or any part thereof between the Licensee and another person that is not made at fair market value shall be deemed to have been made at fair market value, and the fair market value of that transaction, disposition, or other dealing shall be added to and deemed part of the Revenue or the Sublicensing Revenue, as the case may be, and shall be included in the calculation of royalties under this Agreement.

6.0 INITIAL LICENSE FEE, ANNUAL MAINTENANCE FEE AND MINIMUM ANNUAL ROYALTY:

6.1. As part of the consideration for the rights granted by the University to the Licensee hereunder, the Licensee agrees to issue to the University, as an initial license fee the sum of $— (Canadian funds) (the *"**Initial License Fee**").* The said sum shall be paid concurrently with the execution of this Agreement. Neither all nor any portion of the said sum shall be refundable to the Licensee under any circumstances.

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6.2. The Licensee acknowledges and agrees that the University has agreed to accept the Initial License Fee on the condition that [†].

6.3. In further consideration for the license granted hereunder, the Licensee shall pay to the University, in addition to all other amounts due under this Agreement, an annual maintenance fee of CAN. $— payable on execution of this Agreement and thereafter on or before September 1st of each year during which this Agreement remains in full force and effect (the *"**Annual Maintenance Fee**").* Neither all nor any part of the Annual Maintenance Fee paid shall be refundable to the Licensee under any circumstances.

6.4. In addition to all other payments due hereunder, the Licensee shall pay to the University the following milestones, for each product developed by the Licensee or a sublicensee:

(a) within [†] days of [†]the sum of CAN. $—;

(b) within [†] days of[†], the sum of CAN. $—; and

(c) within [†] days of receipt of[†], the sum of CAN. $—.

For greater clarity, it is agreed that the foregoing milestone payments shall be due and payable by the Licensee regardless of whether such milestones are achieved by the Licensee or a sublicensee, and such milestone payments shall in no way effect or diminish the royalties which are due and payable hereunder, and in particular, the calculation of the amount of royalty payable in connection with the Sublicensing Revenue.

6.5. The Licensee shall pay to the University the milestones due under Article 6.4. in the timeframes provided under Article 6.4, with the following exceptions:

(a) [†];

(b) [†]:

(i) [†], or

(ii) [†]; and

6.6. For greater certainty, and notwithstanding any provisions within this Agreement to the contrary, the parties agree that:

(a) [†]; and

(b) [†].

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

7.0 PATENTS:

7.1. The Licensee shall have the right to identify any process, use or products arising out of the Technology and any UBC Improvements or any Joint Improvements that may be patentable including the right to apply for further patents in other jurisdictions, or continuations, continuations-in-part, divisions, reissues, re-examinations or extensions of the Patents or any further applications made hereunder, and shall take all reasonable steps to apply for such a patents in the name of the University or jointly in the names of the University and the Licensee in the case of any patent relating to a Joint Improvement, provided that the Licensee pays all costs of applying for, registering and maintaining the patent in such jurisdictions as the Licensee may designate. The Licensee shall be responsible for the management, filing, prosecution and maintenance of such Patents, provided however, that the Licensee will obtain the University's prior consent, as to any material decision or action taken in the prosecution of such Patents, which consent shall not to be unreasonably withheld by the University. The Licensee shall also provide the University with copies of all correspondence and documents relating to the filing, prosecution and maintenance of the Patents. In the event that this Agreement is terminated for any reason whatsoever, the Licensee shall pay all outstanding costs relating to such patent applications to the date of termination and shall direct the patent agents responsible for such patent applications to take all further instructions, if any, relating to such applications from the University.

7.2. On the issuance of a patent in accordance with Article 7.1, the Licensee shall have the right to become, and shall become, the licensee of the same all pursuant to the terms contained herein.

7.3. As of April 27, 2001, the University has incurred CAN. $80,091.70 in patenting the Technology. On execution of this Agreement, the Licensee will pay to the University the sum of CAN. $80,091.70 to reimburse the University for these costs. All further costs with respect to all Patents or Patent Applications relating to the Technology and any UBC Improvements or Joint Improvements, and all maintenance fees for such patents incurred by the University at any time after April 27, 2001, shall be reimbursed by the Licensee to the University within 30 days of presentation of receipts and/or invoices by the University to the Licensee. Without limiting the generality of the forgoing the Licensee agrees to pay for all costs with respect to the Patents, patent applications, divisionals, substitutions, continuations, continuations in part, all claims of foreign patent applications.

7.4. Should the Licensee decide to:

(a) discontinue pursuing patent protection in relation to the Patents, or any continuation, continuation-in-part, division, re-issue, re-examination or extension of the Patent(s), or

(b) not pursue patent protection in relation to the Patent(s) in any jurisdiction, or

(c) discontinue or not pursue patent protection in relation to any further process, use or products arising out of the UBC Improvements or Joint Improvements in any jurisdiction,

then the Licensee shall provide the University with a minimum of [†] days notice of its decision to discontinue or not to pursue such patent protection in sufficient time for the University to file a

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patent application, or continue pursuing an existing patent application. During the [†] day transition period the Licensee shall be responsible for all costs of filing, prosecuting and maintaining the Patents.

7.5. The Licensee shall provide to the University [†].

7.6. [†].

7.7. The Licensee will ensure proper patent marking for all Technology, and any UBC Improvements or Joint Improvements licensed hereunder and shall clearly mark the appropriate patent numbers on any Products made using the Technology and any UBC Improvements or Joint Improvements or any patented processes used to make such Products.

8.0 DISCLAIMER OF WARRANTY:

8.1. The University makes no representations, conditions or warranties, either express or implied, with respect to the Technology or any Improvements or the Products. Without limiting the generality of the foregoing, the University specifically disclaims any implied warranty, condition or representation that the Technology or any Improvements or the Products:

(a) shall correspond with a particular description;

(b) are of merchantable quality;

(c) are fit for a particular purpose; or

(d) are durable for a reasonable period of time.

The University shall not be liable for any loss, whether direct, consequential, incidental or special, which the Licensee suffers arising from any defect, error, fault or failure to perform with respect to the Technology or any Improvements or Products, even if the University has been advised of the possibility of such defect, error, fault or failure. The Licensee acknowledges that it has been advised by the University to undertake its own due diligence with respect to the Technology and any Improvements.

8.2. The parties acknowledge and agree that the *International Sale of Goods Contracts Convention Act* and the United Nations Convention on Contracts for the International Sale of Goods have no application to this Agreement.

8.3. Nothing in this Agreement shall be construed as:

(a) a warranty or representation by the University as to title to the Technology and/or any Improvement or that anything made, used, sold or otherwise disposed of under the license granted in this Agreement is or will be free from infringement of patents, copyrights, trade-marks, industrial design or other intellectual property rights;

(b) an obligation by the University to bring or prosecute or defend actions or suits against third parties for infringement of patents, copyrights, trade-marks, industrial designs or other intellectual property or contractual rights; or

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(c) the conferring by the University of the right to use in advertising or publicity the name of the University or the UBC Trade-marks.

8.4. Notwithstanding Article 8.3, in the event of an alleged infringement of the Technology or any UBC Improvements or Joint Improvements or any right with respect to the Technology or any UBC Improvements or Joint Improvements, the Licensee or a sublicensee shall have, upon receiving the prior written consent of the University, such consent not to be unreasonably withheld, the right but not the obligation to prosecute litigation designed to enjoin infringers of the Technology or any UBC Improvements or Joint Improvements. The Licensee acknowledges and agrees that the University may require the consent of [†] and/or AMC, as appropriate (in so far as any UBC - [†] Technology or UBC - Amsterdam Technology is alleged to be infringed), prior to providing such consent. Provided that it has first granted its prior written consent, the University agrees to co-operate to the extent of executing all necessary documents and to vest in the Licensee or sublicensee the right to institute any such suits, so long as all the direct and indirect costs and expenses of bringing and conducting any such litigation or settlement shall be borne by the Licensee or sublicensee and in such event all recoveries shall enure to the Licensee or sublicensee.

8.5. If any complaint alleging infringement or violation of any patent or other proprietary rights is made against the Licensee or a sublicensee of the Licensee with respect to the use of the Technology or any UBC Improvements or Joint Improvements or the manufacture, use or sale of the Products, the following procedure shall be adopted:

(a) the Licensee shall promptly notify the University upon receipt of any such complaint and shall keep the University fully informed of the actions and positions taken by the complainant and taken or proposed to be taken by the Licensee on behalf of itself or a sublicensee;

(b) except as provided in Article 8.5(d), all costs and expenses incurred by the Licensee or any sublicensee of the Licensee in investigating, resisting, litigating and settling such a complaint, including the payment of any award of damages and/or costs to any third party, shall be paid by the Licensee or any sublicensee of the Licensee, as the case may be;

(c) no decision or action concerning or governing any final disposition of the complaint shall be taken without full consultation with and approval by the University;

(d) the University may elect to participate formally in any litigation involving the complaint to the extent that the court may permit, but any additional expenses generated by such formal participation shall be paid by the University (subject to the possibility of recovery of some or all of such additional expenses from the complainant);

(e) notwithstanding Article 8.3, if the complainant is willing to accept an offer of settlement and one of the parties to this Agreement is willing to make or accept such offer and the other is not, then the unwilling party shall conduct all further proceedings at its own expense, and shall be responsible for the full amount of any damages, costs, accounting of profits and settlement costs in excess of those provided in such offer, but shall be entitled to retain unto itself the benefit of any litigated or settled result entailing a lower payment of costs, damages, accounting of profits and settlement costs than that provided in such offer; and

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(f) the royalties payable pursuant to this Agreement shall be paid by the Licensee to the University in trust from the date the complaint is made until such time as a resolution of the complaint has been finalized. If the complainant prevails in the complaint, then the royalties paid to the University in trust pursuant to this Article shall be returned to the Licensee, provided that the amount returned to the Licensee hereunder shall not exceed the amount paid by the Licensee to the complainant in the settlement or other disposition of the complaint. If the complainant does not prevail in the complaint, then the University shall be entitled to retain all royalties paid to it pursuant to this Article.

9.0 INDEMNITY AND LIMITATION OF LIABILITY:

9.1. The Licensee hereby indemnifies, holds harmless and defends the University, its Board of Governors, officers, employees, faculty, students, invitees and agents against any and all claims (including all legal fees and disbursements incurred in association therewith) collectively a *"**Claim**")* arising out of the exercise of any rights under this Agreement including, without limiting the generality of the foregoing, against any damages or losses, consequential or otherwise, arising from or out of the use of the Technology or Products licensed under this Agreement by the Licensee or its sublicensees, and sub-sublicensees, or their customers or end-users howsoever the same may arise. A condition of this obligation is that, whenever the University has information from which it may reasonably conclude an incident has occurred which could give rise to a Claim, the University shall promptly give notice to the Licensee of all pertinent data surrounding such incident and, in the event a Claim is made or suit is brought the University shall assist the Licensee and cooperate in the gathering of information with respect to the time, place and circumstances and in obtaining the names and addresses of any injured parties and available witnesses. The University shall not voluntarily make any payment or incur any expense in connection with any such Claim without the prior written consent of the Licensee. The Licensee shall have control over the defence and settlement of any Claim, provided that the Licensee keeps the University informed of all activities in a timely manner. The obligations set forth in this Article 9.1 shall survive the expiration or termination of this Agreement.

9.2. Subject to Article 9.3, the University's total liability, whether under the express or implied terms of this Agreement, in tort (including negligence), or at common law, for any loss or damage suffered by the Licensee, whether direct, indirect or special, or any other similar or like damage that may arise or does arise from any breaches of this Agreement by the University, its Board of Governors, officers, employees, faculty, students or agents, shall be limited to the amount of the Initial License Fee paid pursuant to Article 6.1.

9.3. In no event shall the University be liable for consequential or incidental damages arising from any breach or breaches of this Agreement.

9.4. No action, whether in contract or tort (including negligence), or otherwise arising out of or in connection with this Agreement, may be brought by the Licensee more than six months after the cause of action has occurred.

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10.0 PUBLICATION AND CONFIDENTIALITY:

10.1. The Information provided by the University shall be developed, received and used by the Licensee solely in furtherance of the purposes set forth in this Agreement subject to the terms and conditions set forth in this Article 10.

10.2. Each party hereto covenants and agrees that it will initiate and maintain an appropriate internal program limiting the internal distribution of the other party's Confidential Information to only those officers, employees and professional advisors who require said Confidential Information in performing their obligations under this Agreement and who have signed confidentiality and non-disclosure agreements in a form approved by the Licensee's Board of Directors in the case of the Licensee and in a form consistent with the terms of this Agreement in the case of the University.

10.3. Subject to Article 10.8, the Licensee and the University shall not use, either directly or indirectly, any Confidential Information of the other party for any purpose other than as set forth herein without the other party's prior written consent.

10.4. If the Licensee or the University are required by judicial or administrative process to disclose any or all of the other party's Confidential Information, they shall promptly notify the other party and allow the other party reasonable time to oppose such process before disclosing any such Confidential Information.

10.5. Notwithstanding any termination or expiration of this Agreement, the obligations created in this Article 10 shall survive and be binding upon the Licensee and the University, and their successors and assigns.

10.6. The University shall not be restricted from presenting at symposia, national or regional professional meetings, or from publishing in journals or other publications, accounts of its research relating to the Information, provided that with respect to Confidential Information only, the Licensee shall have been furnished copies of the disclosure proposed therefor at least [†] days in advance of the presentation or publication date and does not within [†] days after receipt of the proposed disclosure object to such presentation or publication. Any objection to a proposed presentation or publication shall specify the portions of the presentation or publication considered objectionable (the *"**Objectionable Material**")*. Upon receipt of notification from the Licensee that any proposed publication or disclosure contains Objectionable Material, the University and the Licensee shall work together to revise the proposed publication or presentation to remove or alter the Objectionable Material in a manner acceptable to the Licensee, in which case the Licensee shall withdraw its objection. If an objection is made, disclosure of the Objectionable Material shall not be made for a period of [†] months after the date the Licensee has received the proposed publication or presentation relating to the Objectionable Material. The University shall co-operate in all reasonable respects in making revisions to any proposed disclosures if considered by the Licensee to contain Objectionable Material. The University shall not be restricted from publishing or presenting the proposed disclosure as long as the Objectionable Material has been removed. After the 6 month period has elapsed the University shall be free to present and/or publish the proposed publication or presentation whether or not it contains Objectionable Material.

10.7. Subject to Article 10.8, the Licensee requires of the University, and the University agrees insofar as it may be permitted to do so at law, that this Agreement, and each part of it, is

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confidential and shall not be disclosed to third parties, as the Licensee claims that such disclosure would or could reveal commercial, scientific or technical information and would significantly harm the Licensee's competitive position and/or interfere with the Licensee's negotiations with prospective sublicensees. Notwithstanding anything contained in this Article, the parties hereto acknowledge and agree that the University may identify the title of this Agreement, the parties to this Agreement and the names of the inventors of the Technology and any Improvements.

10.8. Notwithstanding the forgoing, the parties acknowledge and agree that the University and the Licensee may provide a copy of this Agreement to AMC, AMT and [†], and the University must provide certain reports and information to its Board of Governors, the Province of British Columbia and the government of Canada which may inter alia, include a summary of the terms of this Agreement and the activities thereunder.

11.0 PRODUCTION AND MARKETING:

11.1. The Licensee shall not use any of the UBC Trade-marks or make reference to the University or its name in any advertising or publicity whatsoever, without the prior written consent of the University, except as required by law and except that the Licensee and any of its sublicensees may disclose the existence and nature of this Agreement and (subject to the confidentiality provisions of Article 10) the nature of the technology being licensed without the need for the University's consent. Without limiting the generality of the foregoing, the Licensee shall not issue a press release with respect to this Agreement or any activity contemplated herein without the prior review and approval of same by the University, which approval shall not be unreasonably withheld, except as required by law. If the Licensee is required by law to act in contravention of this Article, to the extent permissible by law, the Licensee shall provide the University with sufficient advance notice in writing to permit the University to bring an application or other proceeding to contest the requirement.

11.2. The Licensee will not register or use any UBC Trade-marks in association with the Products without the prior written consent of the University.

11.3. The Licensee shall use its commercially reasonable efforts to[†]. The University acknowledges and agrees that subject to the University's prior review and approval of the terms in the contemplated sublicense between the Licensee and AMT pursuant to Article 4.1, the granting of such a sublicense by the Licensee to AMT will meet the forgoing obligation of the Licensee. Without limiting the generality of the foregoing, the Licensee covenants and agrees that it shall provide to the University, on each of the first five anniversaries of the Commencement Date of the License Agreement or the date of an amendment to the License Agreement, a written report (the "***Status Report***") summarizing the Licensee's development activities relating to the Technology and any Improvements that sets out all of the following information:

(a) a summary of the research and development activities that the Licensee has undertaken in the course of the preceding 12 months to develop and commercialize the Technology and any Improvements;

(b) a detailed summary of any and all improvements, variations, updates, modifications and enhancements to the Technology and any Improvements which the Licensee has developed and/or acquired in the course of the preceding

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12 months, including any improvements, variations, updates, modifications and enhancements to the Technology or any Improvements of which the Licensee has been advised by any sublicensee, or sub-sublicensee of the Licensee; and

(c) any and all corporate alliances formed by the Licensee related to the Technology or any Improvements in the course of the preceding 12 months, including any such corporate alliances of which the Licensee has been advised by a sublicensee or sub-sublicensee of the Licensee.

11.4. If the University is of the view that the Licensee is in material breach of Article 11.3, then the University shall notify the Licensee and the parties hereto shall appoint a mutually acceptable person as an independent evaluator (the *"**Evaluator**") **to*** conduct the evaluation set forth in Article 11.3. If that the parties cannot agree on such an Evaluator, the appointing authority shall be the British Columbia International Commercial Arbitration Centre.

11.5. Unless the Parties mutually agree otherwise, the following rules and procedures shall govern the conduct of the parties and the Evaluator before and during the investigation by the Evaluator:

(a) within [†] days of the appointment of the Evaluator each party shall provide to the Evaluator and the other party copies of all documents, statements and records on which the party intends to rely in presenting its position to the Evaluator;

(b) within [†] days of the appointment of the Evaluator the Licensee shall provide to the Evaluator and the University a written summary of its position. On receipt of the Licensee's summary the University shall have [†] days to prepare and submit to the Licensee and the Evaluator its own summary in reply to the summary submitted by the Licensee;

(c) on receipt of the documents, statements, records and summaries submitted by the parties the Evaluator shall have [†] days within which to conduct such further inquiries as he or she may deem necessary for the purpose of reviewing the efforts made by the Licensee with respect to the promotion, marketing and sale of the Products and the Technology and any Improvements in compliance with the requirements of Article 11.3. For the purpose of conducting such an inquiry, the Evaluator shall have the right to:

(i) require either party to disclose any further documents or records which the Evaluator considers to be relevant;

(ii) interview or question either orally (or by way of written questions) one or more representatives of either party on issues deemed to be relevant by the Evaluator;

(iii) make an *"on site"* inspection of the Licensee's facilities;

(iv) obtain if necessary, the assistance of an independent expert to provide technical information with respect to any area in which the Evaluator does not have a specific expertise;

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(d) On completion of the Inquiry described in Article 11.5(c) the Evaluator shall within [†] days prepare a report setting out his or her findings and conclusions as to whether or not the Licensee has committed a breach of Article 11.3. If the Evaluator has determined that the Licensee has committed a breach of Article 11.3, then the Evaluator shall also set out in the report his or her conclusions as to whether such breach:

(i) was substantially due to external market conditions not within the control of the Licensee, or

(ii) was substantially due to the Licensee's failure to use its commercially reasonable efforts to comply with the requirements of Article 11.3.

(e) The report and conclusions of the Evaluator shall be delivered to the Licensee and the University, and shall be accepted by both parties as final and binding.

11.6. If the Evaluator concludes:

(a) pursuant to Article 11.5(d)(i) that the Licensee's material breach was substantially due to external market conditions and not due to any omission or failure on the part of the Licensee, then the License granted hereunder shall continue in good standing,

(b) pursuant to Article 11.5(d)(ii) that the Licensee's material breach was substantially due to the Licensee's failure to use commercially reasonable efforts then the University shall at its option have the right to terminate this Agreement as provided in Article 18, or

(c) pursuant to Article 11.5(d) that the Licensee is not in material breach of Article 11.3, then the University shall not terminate this Agreement for breach of Article 11.3, nor shall it change the nature of the license granted hereunder.

11.7. The University may not call for more than one evaluation pursuant to Article 11.4 in each calendar year. The cost of an evaluation hereunder shall be borne[†].

12.0 ACCOUNTING RECORDS:

12.1. The Licensee shall maintain at its principal place of business, or such other place as may be most convenient, separate accounts and records of all Revenues, sublicenses and Sublicensing Revenues, and all business done pursuant to this Agreement, such accounts and records to be in sufficient detail to enable proper returns to be made under this Agreement, and the Licensee shall cause its sublicensees to keep similar accounts and records.

12.2. The Licensee shall deliver to the University on the date [†] days after each and every Royalty Due Date, together with the royalty payable thereunder, the Accounting and a report on all Sublicensing activity, including an accounting statement setting out in detail how the amount of Sublicensing Revenue was determined and identifying each sublicensee and the location of the business of each sublicensee.

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12.3. The calculation of royalties shall be carried out in accordance with generally accepted Canadian accounting principles *("**GAP**")*, or the standards and principles adopted by the U.S. Financial Accounting Standards Board *("**FASB**")* applied on a consistent basis.

12.4. The Licensee shall retain the accounts and records referred to in Article 12.1 above for at least [†] years after the date upon which they were made and shall permit any duly authorized representative of the University to inspect such accounts and records during normal business hours of the Licensee at the University's expense. The Licensee shall furnish such reasonable evidence as such representative will deem necessary to verify the Accounting and will permit such representative to make copies of or extracts from such accounts, records and agreements at the University's expense. If an inspection of the Licensee's records by the University shows an under-reporting or underpayment by the Licensee of any amount to the University, in excess of [†]% for any [†] month period, then the Licensee shall reimburse the University for the cost of the inspection as well as pay to the University any amount found due (including any late payment charges or interest) within [†] days of notice by the University to the Licensee.

12.5. During the term of this Agreement, and thereafter, [†].

13.0 INSURANCE:

13.1. Unless satisfactory arrangements are made between the Licensee and the University with respect to a self-insurance program or the requirement for insurance hereunder is waived by the University [†] days prior to the commencement of any human clinical trials or other Product testing involving human subjects by the Licensee or any sublicensee, then the Licensee shall procure and maintain, during the term of this Agreement, the insurance outlined in Articles 13.2 and 13.3 and otherwise comply with the insurance provisions contained in Articles 13.2 and 13.3.

13.2. The Licensee shall give written notice to the University:

(a) [†] days prior to the commencement of any human clinical trials or other Product testing involving human subjects by the Licensee or any sublicensee, *("**Human Clinical Trials**");* and

(b) [†] days prior to the first sale of any Product by the Licensee or any sublicensee, of the terms and amount of the appropriate public liability, product liability and errors and omissions insurance which it has placed. Such insurance shall in no case be less than the insurance which a reasonable and prudent businessperson carrying on a similar line of business would acquire. This insurance shall be placed with a reputable and financially secure insurance carrier, shall include the University, its Board of Governors, faculty, officers, employees, students, and agents as additional insureds, and shall provide primary coverage with respect to the activities contemplated by this Agreement. Such policy shall include severability of interest and cross-liability clauses and shall provide that the policy shall not be cancelled or materially altered except upon at least [†] days' written notice to the University. The University shall have the right to require reasonable amendments to the terms or the amount of coverage contained in the policy. Failing the parties agreeing on the appropriate terms or the amount of coverage, then the matter shall be determined by arbitration. The Licensee shall provide the

University with certificates of insurance evidencing such coverage [†] days before commencement of Human Clinical Trials and [†] days prior to the sales of any Product and the Licensee covenants not to start Human Clinical Trials, or sell any Product before such certificate is provided and approved by the University, or to sell any Product at any time unless the insurance outlined in this Article 13.2 is in effect.

13.3. The Licensee shall require that each sublicensee under this Agreement shall procure and maintain, during the term of the sublicense, public liability, product liability and errors and omissions insurance in reasonable amounts, with a reputable and financially secure insurance carrier or provide satisfactory arrangements through an appropriate self-insurance program. The Licensee shall use its best efforts to ensure that any and all such policies of insurance required pursuant to this Article shall contain a waiver of subrogation against the University, its Board of Governors, faculty, officers, employees, students, and agents.

14.0 ASSIGNMENT:

14.1. Except as hereinafter provided, the Licensee will not assign, transfer, mortgage, charge or otherwise dispose of any or all of the rights, duties or obligations granted to it under this Agreement without the prior written consent of the University, (subject to the Licensee's right to sublicense without the prior written consent of the University pursuant to Article 4.1), such consent not to be unreasonably withheld. The Licensee may assign this license without the consent of the University as part of a merger, acquisition or other business combination in which all or substantially all of the assets of the Licensee are transferred.

14.2. The University shall have the right to assign its rights, duties and obligations under this Agreement to a company or society of which it is the sole shareholder, in the case of a company, or of which it controls the membership, in the case of a society. In the event of such an assignment, the Licensee will release, remise and forever discharge the University from any and all obligations or covenants, provided however that such company or society, as the case may be, executes a written agreement which provides that such company or society shall assume all such obligations or covenants from the University and that the Licensee shall retain all rights granted to the Licensee pursuant to this Agreement.

15.0 GOVERNING LAW:

15.1. This Agreement shall be governed by and construed in accordance with the laws of the Province of British Columbia and the laws of Canada in force therein without regard to its conflict of law rules.

16.0 NOTICES:

16.1. All payments, reports and notices or other documents that any of the parties hereto are required or may desire to deliver to any other party hereto may be delivered only by personal delivery or by registered or certified mail, telex or fax, all postage and other charges prepaid, at the address for such party set forth below or at such other address as any party may hereinafter designate in writing to the others. Any notice personally delivered or sent by telex or fax shall be deemed to have been given or received at the time of delivery, telexing or faxing. Any notice mailed as aforesaid shall be deemed to have been received on the expiration of five days after it is posted, provided that if there shall be at the time of mailing or between the time of

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mailing and the actual receipt of the notice a mail strike, slow down or labour dispute which might affect the delivery of the notice by the mails, then the notice shall only be effected if actually received.

If to the University:
The Managing Director
University - Industry Liaison Office
University of British Columbia
IRC 331 - 2194 Health Sciences Mall
Vancouver, British Columbia
V6T 1Z3
Telephone: (604)822-8580
Fax: (604)822-8589

If to the Licensee:
The President
Xenon Genetics Inc.
Gerald McGavin Building
Suite 100 - 2386 East Mall
Vancouver, British Columbia
V6T 1Z3
Telephone: (604)221-8478
Fax: (604)221-8423

17.0 TERM:

17.1. This Agreement and the license granted hereunder shall terminate on the expiration of a term of 10 years from the Date of Commencement or the expiration of the last patent obtained pursuant to Article 7 herein, whichever event shall last occur, unless earlier terminated pursuant to Article 18 herein.

18.0 TERMINATION:

18.1. This Agreement shall automatically and immediately terminate without notice to the Licensee if any proceeding under the *Bankruptcy and Insolvency Act* of Canada, or any other statute of similar purport, is commenced by or against the Licensee provided such proceedings have not been dismissed within [†] days of the date on which they were commenced. In the event that the sublicense to be entered into between the Licensee and AMT is terminated, the Licensee may terminate this Agreement on [†] days prior written notice to the University, subject to payment of all amounts owed to the University.

18.2. The University may, at its option, terminate this Agreement immediately on the happening of any one or more of the following events by delivering notice in writing to that effect to the Licensee:

(a) if any resolution is passed or order made or other steps taken for the winding up, liquidation or other termination of the existence of the Licensee;

(b) if the Licensee is more than [†] days in arrears of royalties or other monies that are due to the University under the terms of this Agreement after written notice;

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(c) if the Technology or any Improvements becomes subject to any security interest, charge or encumbrance in favour of any third party , other than a sublicensee, granted by the Licensee without prior written consent of the University, not to be unreasonably withheld;

(d) if the Licensee ceases or threatens to cease to carry on its business;

(e) if the Licensee undergoes a reorganization or any part of its business relating to this Agreement is transferred to a subsidiary or associated company without the prior written consent of the University, such consent not to be withheld except as provided in Article 18.3 and to be provided within [†] days of receipt of a written request for the same;

(f) if the Licensee commits any breach of Articles 4.1, 11.1, 11.2 or 13;

(g) if it is determined, pursuant to Article 11.5, that the Licensee is in breach of Article 11.3;

(h) if any sublicensee of the Licensee is in breach of its sublicense agreement with the Licensee and the Licensee does not cause such sublicensee to cure such default within [†] days of receipt of written notice from the University requiring that the Licensee cause such sublicensee to cure such default, or

(i) if the Licensee is in breach of the Collaborative Research Agreement dated August 1, 2000, between the Licensee and the University, which breach has not been cured within the time provided for the curing of such breach under the terms of such other agreement.

18.3. The University shall not withhold its consent pursuant to Article 18.2(e) unless the granting of such consent would result in the University having a contractual relationship with an entity with whom the University is prohibited from contracting with pursuant to its then existing policies.

18.4. Other than as set out in Articles 18.1 and 18.2, if either party shall be in default under or shall fail to comply with the terms of this Agreement then the non-defaulting party shall have the right to terminate this Agreement by written notice to the other party to that effect if:

(a) such default is reasonably curable within [†] days after receipt of notice of such default and such default or failure to comply is not cured within 30 days after receipt of written notice thereof; or

(b) such default is not reasonably curable within [†] days after receipt of written notice thereof, and such default or failure to comply is not cured within such further reasonable period of time as may be necessary for the curing of such default or failure to comply.

Any written notice issued pursuant to this Article 18.5 shall expressly set out the default or defaults with respect to which notice is being given.

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18.5. If this Agreement is terminated pursuant to Article 18.1, 18.2, or 18.4, the Licensee shall make royalty payments to the University in the manner specified in Article 5, and 6 and the University may proceed to enforce payment of all outstanding royalties or other monies owed to the University and to exercise any or all of the rights and remedies contained herein or otherwise available to the University by law or in equity, successively or concurrently, at the option of the University. Upon any such termination of this Agreement, the Licensee shall forthwith deliver up to the University all Technology and any UBC Improvements in its possession or control and shall have no further right of any nature whatsoever in the Technology or any UBC Improvements. On the failure of the Licensee to so deliver up the Technology and any UBC Improvements, the University may immediately and without notice enter the Licensee's premises and take possession of the Technology and any UBC Improvements. The Licensee will pay all charges or expenses incurred by the University in the enforcement of its rights or remedies against the Licensee including, without limitation, the University's legal fees and disbursements on an indemnity basis.

18.6. The Licensee shall cease to use the Technology or any UBC Improvements in any manner whatsoever or to manufacture or sell the Products within five days from the Effective Date of Termination, subject to the expiration or invalidation of any applicable Patents. The Licensee shall then deliver or cause to be delivered to the University an accounting within 30 days from the Effective Date of Termination. The accounting will specify, in or on such terms as the University may in its sole discretion require, the inventory or stock of Products manufactured and remaining unsold on the Effective Date of Termination. The University will instruct that the unsold Products be stored, destroyed or sold under its direction, provided this Agreement was terminated by the University pursuant to Article 18.2 or 18.4 and subject to the expiration or invalidation of any applicable Patents. Without limiting the generality of the foregoing, if this Agreement was terminated pursuant to Article 18.1, the unsold Products will not be sold by any party without the prior written consent of the University. The Licensee will continue to make royalty payments to the University in the same manner specified in Article 5 and 6 on all unsold Products that are sold in accordance with this Article 18.6, notwithstanding anything contained in or any exercise of rights by the University under Article 18.5 herein.

18.7. Notwithstanding the termination of this Agreement, Article 12 shall remain in full force and effect until [†] years after

(a) all payments of royalty required to be made by the Licensee to the University under this Agreement have been made by the Licensee to the University, and

(b) any other claim or claims of any nature or kind whatsoever of the University against the Licensee has been settled.

19.0 MISCELLANEOUS COVENANTS OF LICENSEE:

19.1. The Licensee hereby represents and warrants to the University that the Licensee is a corporation duly organized, existing and in good standing under the laws of Canada and has the power, authority and capacity to enter into this Agreement and to carry out the transactions contemplated by this Agreement, all of which have been duly and validly authorized by all requisite corporate proceedings.

19.2. The Licensee represents and warrants that [†].

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

19.3. The Licensee shall comply with all laws, regulations and ordinances, whether Federal, State, Provincial, County, Municipal or otherwise, with respect to the Technology and any Improvements and/or this Agreement.

19.4. [†].

19.5. [†].

19.6. The Licensee shall pay all taxes and any related interest or penalty howsoever designated and imposed as a result of the existence or operation of this Agreement, including, but not limited to, tax which the Licensee is required to withhold or deduct from payments to the University. The Licensee will furnish to the University such evidence as may be required by Canadian authorities to establish that any such tax has been paid. The royalties specified in this Agreement are exclusive of taxes. If the University is required to collect a tax to be paid by the Licensee or any of its sublicensees, the Licensee shall pay such tax to the University on demand.

19.7. The obligation of the Licensee to make all payments hereunder will be absolute and unconditional and will not, except as expressly set out in this Agreement, be affected by any circumstance, including without limitation any set-off, compensation, counterclaim, recoupment, defence or other right which the Licensee may have against the University, or anyone else for any reason whatsoever.

19.8. All amounts due and owing to the University hereunder but not paid by the Licensee on the due date thereof shall bear interest in Canadian dollars at the rate of one per cent (1%) per month. Such interest shall accrue on the balance of unpaid amounts from time to time outstanding from the date on which portions of such amounts become due and owing until payment thereof in full.

20.0 GENERAL:

20.1. Nothing contained herein shall be deemed or construed to create between the parties hereto a partnership or joint venture. No party shall have the authority to act on behalf of any other party, or to commit any other party in any manner or cause whatsoever or to use any other party's name in any way not specifically authorized by this Agreement. No party shall be liable for any act, omission, representation, obligation or debt of any other party, even if informed of such act, omission, representation, obligation or debt.

20.2. Subject to the limitations hereinbefore expressed, this Agreement shall enure to the benefit of and be binding upon the parties and their respective successors and permitted assigns.

20.3. No condoning, excusing or overlooking by any party of any default, breach or non- observance by any other party at any time or times in respect of any covenants, provisos or conditions of this Agreement shall operate as a waiver of such party's rights under this Agreement in respect of any continuing or subsequent default, breach or non-observance, so as to defeat in any way the rights of such party in respect of any such continuing or subsequent default or breach, and no waiver shall be inferred from or implied by anything done or omitted by such party, save only an express waiver in writing.

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20.4. No exercise of a specific right or remedy by any party precludes it from or prejudices it in exercising another right or pursuing another remedy or maintaining an action to which it may otherwise be entitled either at law or in equity.

20.5. Marginal headings as used in this Agreement are for the convenience of reference only and do not form a part of this Agreement and are not be used in the interpretation hereof.

20.6. The terms and provisions, covenants and conditions contained in this Agreement which by the terms hereof require their performance by the parties hereto after the expiration or termination of this Agreement shall be and remain in force notwithstanding such expiration or other termination of this Agreement for any reason whatsoever.

20.7. If any Article, part, section, clause, paragraph or subparagraph of this Agreement shall be held to be indefinite, invalid, illegal or otherwise voidable or unenforceable, the entire Agreement shall not fail on account thereof, and the balance of this Agreement shall continue in full force and effect.

20.8. The parties hereto each acknowledge that the law firm of Richards Buell Sutton has acted solely for the University in connection with this Agreement and that all other parties hereto have been advised to seek independent legal advice.

20.9. This Agreement sets forth the entire understanding between the parties and no modifications hereof shall be binding unless executed in writing by the parties hereto.

20.10. Time shall be of the essence of this Agreement.

20.11. Whenever the singular or masculine or neuter is used throughout this Agreement the same shall be construed as meaning the plural or feminine or body corporate when the context or the parties hereto may require.

20.12. This Agreement may be executed in any number of counterparts, each of which when delivered will be deemed to be an original, for all purposes and will constitute one and the same instrument, binding on the parties, notwithstanding that all the parties are not signatories of the same counterpart.

20.13. In the event of a conflict arising between the interpretation of this Agreement and the Collaborative Research Agreement, the terms of this Agreement shall prevail.

IN WITNESS WHEREOF the parties hereto have hereunto executed this Agreement on the 15th day of February, 2001 but effective as of the Date of Commencement.

Annex 2

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

SIGNED FOR AND ON BEHALF of)
THE UNIVERSITY OF BRITISH COLUMBIA)
by its duly authorized officers:)
)
)
_____)
Authorized Signatory)
)
_____)
Authorized Signatory)
)
THE CORPORATE SEAL of)
XENON GENETICS INC)
was hereunto affixed in the presence of:)
) c/s
_____)
Authorized Signatory)
)
_____)
Authorized Signatory)
)
)

Annex 2

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

SCHEDULE "***A***"

DESCRIPTION OF "***TECHNOLOGY***"

UBC File #	Title	Inventors	Patents
94-061	Lipolipase Mutation 291, Implication for Coronary Artery Disease		U.S.:5,658,729 U.S.: SN 08/817,192 Can.: SN 2,202,477 EPO: 95 93 75 98.1 (Ger., Fr., U.K., Switz.)
91-003	Mutation in Human Lipoprotein Lipase Gene which causes Type 1 Hyperlipoproteinemia		Can.: SN 2,035,177
99-082	Recombinant Viruses Preparation and use thereof in Gene Therapy		U.S.: SN 08/737,954 FR: 94/06759 PCT: FR 95/00669 CIP: SN 09/713,268
00-039	Mutation 447		PCT: CA00/00762

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CONSENT OF XENON AND UBC

TO UNIQURE-CHIESI AGREEMENT

THIS AGREEMENT is made as of June 28, 2013 (the "**Effective Date**"),

BETWEEN:

XENON PHARMACEUTICALS INC.

("Xenon")

AND:

THE UNIVERSITY OF BRITISH COLUMBIA

("UBC")

AND:

UNIQURE BIOPHARMA B.V.

("uniQure")

WITNESSES THAT WHEREAS:

A. uniQure and Xenon (formerly known as Xenon Genetics Inc.) are parties to a Sublicense and Research Agreement dated June 18, 2001 (the "**Xenon-uniQure Agreement**"), which is, among other things, a sublicense under a License Agreement between Xenon and UBC dated February 15, 2001;

B. The Xenon-uniQure Agreement requires the consent of both Xenon and UBC to any grant of a further sublicense thereunder by uniQure;

C. uniQure desires to sublicense to Chiesi Farmaceutici S.p.A ("**Chiesi**") certain rights under the Xenon-uniQure Agreement, on the terms and conditions set out in the Commercialization Agreement dated April 29, 2013 (the "**uniQure-Chiesi Agreement**") attached as Schedule A to this Agreement; and

D. Xenon and UBC desire to consent to uniQure sublicensing to Chiesi certain rights under the Xenon-uniQure Agreement on the terms set out in the Commercialization Agreement, and uniQure desires to accept such consent, on the terms set out in this Agreement.

NOW THEREFORE THE PARTIES, for good and valuable consideration (the receipt and sufficiency of which is hereby acknowledged), covenant and agree as follows:

1. **Consent by Xenon and UBC to Sublicensing.** Xenon and UBC hereby consent to uniQure sublicensing to Chiesi certain rights under the Xenon-uniQure Agreement on the

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terms set out in the uniQure-Chiesi Agreement, and on the terms set out in this Agreement. By granting consent under this Section, neither Xenon nor UBC is waiving any of the terms of the Xenon-uniQure Agreement, and Xenon retains all its rights under the Xenon-uniQure Agreement.

2. **Xenon Share of Payments under Xenon-uniQure Agreement.** Xenon and uniQure acknowledge and agree that, pursuant to the terms of the Xenon-uniQure Agreement, as amended hereby, Xenon is entitled to receive the share ("**Xenon Share**") set out below of the following payments from Chiesi to uniQure under the uniQure-Chiesi Agreement:

   (a) Pursuant to Section 5.6 of the Xenon-uniQure Agreement, Xenon is entitled to receive [†]% of the one-time fee of EUR [†] (the "**One-Time Fee**") set out in Section 2.1(c)(1) of the uniQure-Chiesi Agreement.

   (b) Pursuant to Section 5.6 of the Xenon-uniQure Agreement, Xenon is entitled to receive [†]% of the commercial milestone payments (the "**Commercial Milestone Payments**") of up to EUR [†] set out in Sections 2.1(c)(2)(A) through (D) of the uniQure-Chiesi Agreement.

   (c) Pursuant to Section 6.2 of the Xenon-uniQure Agreement, as amended hereby, Xenon is entitled to receive the royalties set-out below:

      i. [†]% of all payments of the Purchase Price (as defined in the uniQure-Chiesi Agreement) set out in Sections 2.3(c)(i) and (ii) of the uniQure-Chiesi Agreement, for the period prior to expiration of the last-to-expire patent included in the Xenon Licensed Technology or Licensed Products (the "**Patent Period**"), subject to adjustment pursuant to Section 6.3 of the Xenon-uniQure Agreement; and

      ii. [†]% of all payments of the Purchase Price set out in Sections 2.3(c)(i) and (ii) of uniQure-Chiesi Agreement, for the period beginning after expiration of the Patent Period and ending [†] years after the date of first sale by Chiesi, its affiliates or subdistributors for use or consumption by the general public of any Product (as defined in the uniQure-Chiesi Agreement) after Marketing Authorization (as defined in the uniQure-Chiesi Agreement) has been obtained for the Product, but without any adjustment pursuant to Section 6.3 of the Xenon-uniQure Agreement.

   For the purposes of this Agreement, the Xenon-uniQure Agreement is hereby amended to give effect to the provisions of this Section 2(c).

3. **Payment of Xenon Share.** uniQure will pay the Xenon Share, without set-off or deduction of any nature whatsoever or notice or demand therefor, to Xenon as follows:

   (a) uniQure will pay to Xenon the [†]% Xenon Share of the One-Time Fee as follows:

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i. [†]% within [†] days after receipt by uniQure of the One-Time Fee from Chiesi pursuant to the uniQure-Chiesi Agreement; and

ii. [†]% on the first anniversary of the Effective Date of this Agreement;

(b) uniQure will pay to Xenon the [†]% Xenon Share of each and every of the Commercial Milestone Payments within [†] days after receipt by uniQure of each and every Commercial Milestone Payment from Chiesi; and

(c) uniQure will pay to Xenon the [†]% (subject to Section 6.3 of the Xenon-uniQure Agreement) or [†]%, as the case may be, Xenon Share of the Purchase Price within [†] days after receipt by uniQure of each and every payment received by uniQure from Chiesi pursuant to Sections 2.3(c)(i) and (ii) of uniQure-Chiesi Agreement, by paying to Xenon [†]% (subject to Section 6.3 of the Xenon-uniQure Agreement) or [†]% of each and every such payment.

4. **Reports and Audit of Xenon Share.**

(a) uniQure will deliver to Xenon with each payment of the Xenon Share a written report setting out in detail how the amount of the payment was determined.

(b) Xenon will have the right to have an independent certified public accounting firm (or local equivalent) of nationally recognized standing, reasonably acceptable to uniQure, have access during normal business hours, and upon reasonable prior written notice, to uniQure's records (and its sub-sublicensees') as may be reasonably necessary to verify the accuracy of payments of the Xenon Share; provided, however, that Xenon will not have the right to conduct more than one such audit in any calendar year. Xenon will bear the cost of such audit unless the audit reveals an underpayment to Xenon of more than [†]%, in which case uniQure will bear the cost of the audit. If, based on the results of such audit, additional payments are owed by uniQure under this Agreement, uniQure will make such additional payments, with interest as set forth in Section 7(c) of this Agreement, within [†] days after the date on which such accounting firm's written report is delivered to uniQure.

(c) If any payment of the Xenon Share is not made when due, uniQure will pay to Xenon interest on the balance unpaid at (i) a rate of [†]% per month, compounded monthly (equivalent to [†]% per annum) until paid, or (ii) the greatest amount payable under applicable law, whichever is lower.

5. **Evidence of Chiesi Insurance.** uniQure will provide to Xenon, upon request, with evidence of the insurance procured and maintained by Chiesi pursuant to Section 6.5 of the uniQure-Chiesi Agreement. The foregoing will not waive or limit any of uniQure's obligations relating to insurance that are set out in Article 11 of the Xenon-uniQure Agreement.

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6. **Consent by uniQure to Certain Information Disclosures.**

(a) Pursuant to Section 8.3 of the Xenon-uniQure Agreement, uniQure hereby consents to the disclosure of the Xenon-uniQure Agreement, as well as other information of uniQure made confidential by Article 8 of the Xenon-uniQure Agreement, by Xenon in connection with Xenon's financing or acquisition activities ("**Financing or Acquisition Activities**") to Xenon's existing or potential investors, lenders, acquirers, investment bankers, underwriters, analysts and other third parties (which shall be deemed to include their legal counsel) ("**Financing or Acquisition Disclosees**"), solely on a need-to-know basis and under obligations of confidentiality and non-use ("**Financing or Acquisition Disclosee Confidentiality Obligations**") that are at least equivalent in scope to those set out in Article 8 of the Xenon-uniQure Agreement. Notwithstanding the foregoing, Xenon may not disclose in whole or in part any copy of the uniQure-Chiesi Agreement under this Section 6(a), except with uniQure's prior written consent.

(b) Further, in connection with due diligence reviews as part of any Financing or Acquisition Activities of Xenon, on Xenon's reasonable request uniQure agrees to provide such further information as may be reasonably requested by Xenon with regard to timelines of the status of activities and nature of material terms under the Xenon-uniQure Agreement, which information may be provided at Xenon's direction to Xenon (which shall be deemed to include its legal counsel), to Xenon's designated Financing or Acquisition Disclosees, or to both, provided that any such information will be deemed confidential information of uniQure which (i) if provided to Xenon, will be subject to Article 8 of the Xenon-uniQure Agreement, and (ii) if provided to any Financing or Acquisition Disclosees, will be subject to Financing or Acquisition Disclosee Confidentiality Obligations.

(c) Finally, notwithstanding Article 8 of the Xenon-uniQure Agreement, Xenon will be permitted to make disclosure of the Xenon-uniQure Agreement, as well as other information of uniQure made confidential by Article 8 of the Xenon-uniQure Agreement, as required by public disclosure or timely disclosure requirements imposed by securities law or stock exchange policies ("**Securities Law Disclosures**"), provided however that Xenon will promptly notify uniQure thereof, and allow uniQure reasonable time to review such proposed disclosure to the extent practicable in the circumstances. Further, uniQure agrees to provide timely reviews of any written material Xenon, its counsel or investment bankers might reasonably request with respect to any such Securities Law Disclosures needing to be made in any written materials Xenon plans to make to regulatory authorities such as the SEC.

7. **Entire Agreement.** The Xenon-uniQure Agreement and this Agreement will, to the extent permitted at law, be read together as if both documents were contained in the same instrument. The Xenon-uniQure Agreement and this Agreement, together with the other agreements or instruments between the parties referred to in the Xenon-uniQure

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Agreement and this Agreement, constitute the entire agreement between the parties pertaining to the subject matter of the Xenon-uniQure Agreement and this Agreement and supersede all prior agreements, understandings, negotiations and discussions, whether oral or written express or implied, statutory or otherwise between the parties. Except for the other agreements and documents referred to in the Xenon-uniQure Agreement and this Agreement, there are no agreements which are collateral to this Agreement and no other agreements, collateral or otherwise, and no warranties, express, implied or statutory, with respect to the subject matter of the Xenon-uniQure Agreement or this Agreement, except as expressly provided therein.

8. **Modification; Waiver.** This Agreement may not be altered, amended or modified, except in writing signed by both parties. No failure or delay in enforcing any right or exercising any remedy will be deemed a waiver of any right or remedy. Further, uniQure will not amend the uniQure-Chiesi Agreement in any manner that affects Xenon's rights under this Agreement or changes the financial terms of the uniQure-Chiesi Agreement, without Xenon's prior written consent.

9. **Governing Law.** This Agreement will be exclusively construed and governed in all respects by the laws in force in the province of British Columbia, Canada, and the federal laws of Canada applicable therein, without regard to conflicts of law principles that would apply a different body of law.

(Signature page follows.)

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IN WITNESS whereof, the parties have caused this Agreement to be executed by their authorized representatives as of the Effective Date.

XENON PHARMACEUTICALS INC.

Per: /s/ Simon Pimstone
(Signature)

Name: Simon Pimstone

Title: President & CEO

THE UNIVERSITY OF BRITISH COLUMBIA

Per: /s/ John-Paul Heale
(Signature)

Name: John-Paul Heale
(Print)

Title Associate Director, UILO

UNIQURE BIOPHARMA B.V.

Per: /s/ Authorized Signatory
(Signature)

Name:
(Print)

Title:

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SCHEDULE A

UNIQURE-CHIESI AGREEMENT

See attached.

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COMMERCIALIZATION AGREEMENT

This Commercialization Agreement (this "Agreement") is entered into as of 29 April 2013 (the "Effective Date"), by and between uniQure Biopharma B.V., formerly known as Amsterdam Molecular Therapeutics (AMT) B.V., a Dutch corporation, with its offices at Meibergdreef 61, 1105 BA Amsterdam, The Netherlands ("uniQure"), and Chiesi Farmaceutici S.p.A., an Italian corporation, with its offices at Via Palermo, 26/A, 43122 Parma, Italy ("Chiesi"). uniQure and Chiesi are sometimes referred to herein individually as a "Party" and collectively as the "Parties".

WHEREAS, uniQure is a company engaged in the research and clinical development of human gene based therapies. Its lead product, "Glybera", for the treatment of lipoprotein lipase deficiency was approved by the European Commission in November 2012;

WHEREAS, Chiesi is a pharmaceutical company engaged in the research, development, sales and marketing as well as distribution of ethical medicinal products;

WHEREAS, uniQure desires to appoint Chiesi, on an exclusive basis, to obtain and maintain the best possible Price and Reimbursement Approval (as defined below) and to Commercialize (as defined below) the Product (as defined below) in the Territory (as defined below), in accordance with the terms and conditions set forth below, and Chiesi desires to accept uniQure's exclusive appointment.

NOW, THEREFORE, uniQure and Chiesi hereby agree as follows:

ARTICLE I
DEFINITIONS; INTERPRETATION

Capitalized terms used herein shall have the meanings assigned to them as follows.

1.1 "Affiliate" shall mean, with respect to a Party, any Person Controlled by, in Control of, or under common Control with such Party.

1.2 "Additional Rights" has the meaning set forth in Section 7.5(a).

1.3 "Agreement" has the meaning set forth in the first and opening paragraph of this Agreement.

1.4 "Alliance Manager" has the meaning set forth in Section 4.4.

1.5 "Applicable Laws" shall mean all applicable laws, statutes, codes, rules and regulations, judgments, order and ordinances, including any rules, regulations, guidelines or other requirements of any Regulatory Authority within the Territory, that may be in effect from time to time.

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1.6 "Approved Activities" has the meaning set forth in Section 8.1(b).

1.7 "Average Net Sales Price" shall mean the average net sales price of a particular Product in the Territory, calculated on a monthly basis, by dividing the Net Sales of the Product in the Territory effected in a particular calendar month by the number of patient doses of the Product accounting for the Net Sales in such calendar month.

1.8 "Business Day" shall mean a day on which banking institutions in Amsterdam, The Netherlands and Parma, Italy, are open for business, excluding any Saturday or Sunday.

1.9 "Certificate of Analysis" shall mean the certificate substantially in the form attached hereto as Schedule 1.9 evidencing the analytical test conducted on a specific lot of Product and setting forth, among other items, the items tested, Specifications, and test results.

1.10 "Certificate of Compliance" shall mean the certificate substantially in the form attached as Schedule 1.10 stating that a specific lot of Product complies with the warranties set forth in Section 5.2.

1.11 "Chiesi" has the meaning set forth in the first and opening paragraph of this Agreement.

1.12 "Claims" has the meaning set forth in Section 6.1.

1.13 "Co-Development and License Agreement" shall mean that certain Co-Development and License Agreement for Hemophilia B concluded separately between the Parties on the date hereof.

1.14 "Collaboration" shall mean the relationship between and activities conducted by the Parties under this Agreement and all other agreements between the Parties referenced herein (other than the Confidentiality Agreement), including the Co-Development and License Agreement (collectively, the "Collaboration Agreements").

1.15 "Collaboration Agreements" has the meaning set forth in Section 1.14.

1.16 "Commercialization" shall mean any and all activities, whether before or after Regulatory Approval, directed to the marketing, detailing and promotion of the Product and shall include pre-launch, launch and post-launch marketing, promoting, detailing, marketing research, medical affairs, managed markets, distributing, offering to commercially sell and commercially selling the Product, importing, exporting or transporting the Product for commercial sale and regulatory affairs with respect to the foregoing, including the filing and obtaining of Price and Reimbursement Approval for the Product, but shall not include Manufacturing nor any development activities. When used as a verb, "Commercializing", "Commercialize" and "Commercialized" shall mean to engage in Commercialization.

1.17 "Commercially Reasonable Efforts" shall mean, with respect to the efforts to be expended by a Party with respect to a goal, reasonable, diligent, good faith efforts to accomplish such goal[†]. Without prejudice to the foregoing and with respect to Chiesi, Commercially Reasonable Efforts shall at least include the efforts as further described in Schedule 8.1(a).

1.18 "Confidential Information" shall mean all confidential or proprietary information of a Party, including information regarding such Party's or its Affiliates' or licensors' products, business, business plans, financial status, biological substances, chemical substances, formulations, techniques, methodology, equipment, sources of supply and patent positioning and information belonging to such Party's Affiliate or a Third Party and provided to the other Party under this Agreement. The terms and conditions of this Agreement shall be deemed "Confidential Information" of both Parties. All information disclosed by uniQure prior to the Effective Date pursuant to the Two Way Confidentiality Disclosure Agreement between Amsterdam Molecular Therapeutics (AMT) B.V. and Chiesi Farmaceutici S.p.A. dated 22 July 2010 (the "Confidentiality Agreement") shall be deemed "Confidential Information" of uniQure hereunder.

1.19 "Confidentiality Agreement" has the meaning set forth in Section 1.18.

1.20 "Confirmed Firm Order" has the meaning set forth in Section 2.4(c).

1.21 "Control" or "Controlled" shall mean, (a) when used in reference to any Confidential Information, Patent or other Intellectual Property Rights, the possession (whether by ownership or license (other than solely pursuant to a license under this Agreement)) by such Party or any of its Affiliates, of the legal authority or right to grant to the other Party access or a license or sublicense to such Confidential Information, Patent or other Intellectual Property Rights as provided herein, without violating the terms of any agreement or arrangement with any Third Party, or (b) when used in reference to Section 1.1, (i) the possession, directly or indirectly, of the power to direct the management or policies of a Person, whether through ownership of voting securities, by contract or otherwise; (ii) ownership of fifty percent (50%) or more of the voting securities entitled to vote for the election of directors in the case of a corporation, or fifty percent (50%) or more of the equity interest in the case of any other type of legal entity; or (iii) status as a general partner in any partnership, or any other arrangement whereby a Person controls or have the right to control the board of directors or equivalent governing body of a corporation or other Person. Notwithstanding the foregoing, any portfolio company of any stockholder of such Person (which stockholder is a venture capital fund or private equity fund) shall not be deemed to be "under common Control with" such Person.

1.22 "Controlling Party" has the meaning set forth in Section 7.5(b).

1.23 "Cover" or "Covered" shall mean, with respect to any Patent and the subject matter at issue, that, but for a license granted under a Valid Claim of such Patent, the manufacture, use, sale, offer for sale or importation of the subject matter at issue would infringe such Valid Claim, or, in the case of a Patent that is a patent application, would infringe a Valid Claim in such patent application if it were to issue as a patent.

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1.24 "Delivery Notification" has the meaning set forth in Section 2.5(b).

1.25 "Discretionary Manufacturing Changes" has the meaning set forth in Section 3.4(b).

1.26 "Effective Date" has the meaning set forth in the first and opening paragraph of this Agreement.

1.27 "EMA" shall mean the European Medicines Agency and any successor agency thereto.

1.28 "EU" shall mean the European Union.

1.29 "EU Member States" shall mean Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

1.30 "Executive Officers" shall mean the Chief Executive Officer of Chiesi or a senior officer designated by Chiesi, and the Chief Executive Officer of uniQure or a senior officer designated by uniQure.

1.31 "Existing Third Party Licenses" has the meaning set forth in Section 7.4.

1.32 "EXW" shall mean "ex works" as defined by the International Chamber of Commerce (Incoterms 2010).

1.33 "Failure to Supply" has the meaning set forth in Section 2.6(a).

1.34 "FDA" shall mean the US Food and Drug Administration and any successor agency thereto.

1.35 "Field" shall mean the treatment of lipoprotein lipase deficiency.

1.36 "Firm Order" shall mean a written (including facsimile or email) irrevocable firm purchase order for the Product, which order shall include the precise name of the Product ordered and the quantity of the Product ordered (such quantity to be equal or above the Minimum Order Quantity).

1.37 "First Commercial Sale" shall mean the first sale by Chiesi, an Affiliate of Chiesi, or a Sub-distributor of Chiesi, as the case may be, of the Product to a Third Party in the Territory; provided, however, that neither (a) transfers of the Product between Chiesi and its Affiliates or Sub-distributors nor (b) supply of the Product for clinical trial purposes, shall constitute a First Commercial Sale.

1.38 "Force Majeure Event" has the meaning set forth in Section 11.6.

1.39 "Forecast" has the meaning set forth in Section 2.4(a).

1.40 "FTE" shall mean an annual average of at least [†] hours allocated to one or more persons allocated to the Commercialization of the Product (including product specialists, KAMs, MSLs, medical, regulatory, pharmacovigilance, market access and marketing personnel) in the Territory (both at an headquarter and country level).

1.41 "Fully Loaded Cost of Goods" shall mean the fully loaded cost of goods of the Product as defined in Schedule 2.3.

1.42 "GDPs" shall mean the current good distribution practices promulgated by any Regulatory Authorities or Applicable Laws throughout the Territory that are applicable to the Product.

1.43 "Gene Therapy" shall mean the introduction and expression of genetic material in cells of a person in order to cure a disease or to minimize disease symptoms.

1.44 "Glybera Manufacturing Cost Reimbursement" has the meaning set forth in Section 2.3(c)(i).

1.45 "GMPs" shall mean the current good manufacturing practices promulgated by any Regulatory Authorities or Applicable Laws throughout the Territory that are applicable to the Product.

1.46 "Improvements" shall mean any improvements to the Product Controlled by uniQure during the Term, such as future formulations, dosages, dosage forms, delivery modes and line extensions of the Product, packaging of the Product, labeling of the Product, and developments in the Product itself.

1.47 "Indemnified Party" has the meaning set forth in Section 6.3(i).

1.48 "Indemnifying Party" has the meaning set forth in Section 6.3(i).

1.49 "Intellectual Property Rights" shall mean all patents (including the Patents), trademarks (including the Trademark), trade names, service marks, trade dress, trade secrets and copyrights, including, without limitation, any renewal, extension or other rights therefor, and applications, provisionals, divisionals, reexaminations, continuations in part, divisions, continuations, reissues, additions, substitutions and registrations for any of the foregoing and all corresponding foreign patents and patent applications of each of the foregoing, technical information, devices, processes, procedures, discoveries, techniques, formulae, software, designs, drawings, data, methods, protocols, products, apparatuses and other materials, compositions, mask works, domain names, schematics, manufacturing processes, know-how, moral rights, software programs or applications, manufacturing and production processes and techniques, research and development information, drawings, specifications, designs, plans, proposals, technical data, results of experimentation and testing (whether or not patentable) in written, electronic, physical (including in the form of tangible compounds or cell lines), oral or any other form, financial and marketing plans, customer and supplier lists and information, and all other intellectual property or proprietary rights.

1.50 "JCC" has the meaning set forth in Section 4.2(a).

1.51 "JSC" has the meaning set forth in Section 4.1(a).

1.52 "Losses" has the meaning set forth in Section 6.1.

1.53 "Lost Profit" has the meaning set forth in Section 2.6.

1.54 "Manufacture" and "Manufacturing" shall mean all activities related to the production, manufacture, processing, filling, finishing, packaging, labeling, shipping and holding of the Product or any intermediate thereof, including process development, process qualification and validation, scale up, pre-clinical, clinical and commercial manufacture and analytical development, product characterization, stability testing, quality assurance and quality control. When used as a verb, "Manufacture" shall mean to engage in Manufacturing.

1.55 "Marketing Authorization" shall mean the authorization issued by the relevant Regulatory Authority necessary to place on the market the Product in any country or regulatory jurisdiction in the Territory (including the centralized approval of a Marketing Authorization Application in the EU). For clarity, a Marketing Authorization shall not include any applicable Price and Reimbursement Approvals.

1.56 "Marketing Authorization Application" shall mean an application submitted to a Regulatory Authority for marketing approval of a drug or biologic product, including (a) a Marketing Authorization Application in the EU under Regulation (EC) No. 726/2004 or Directive 2001/83/EC, (b) any non-EU equivalent of the foregoing in any other country in the Territory, and (c) all supplements and amendments that may be filed with respect to any of the foregoing.

1.57 "Marketing Plan" has the meaning set forth in Schedule 8.1(a).

1.58 "Minimum FTEs" has the meaning set forth in Schedule 8.1(a).

1.59 "Minimum Order Quantity" has the meaning set forth in Section 2.4(d).

1.60 "Net Sales" shall mean the total amount of invoiced sales of the Product in the Territory by or on behalf of Chiesi or its Affiliates or Sub-distributors to Third Parties (including wholesalers, hospitals, end users and others), in bona fide arm's length transactions, less the following deductions, in each case related specifically to the Product and customary in the trade and actually allowed and taken by such Third Parties and not otherwise recovered by or reimbursed to Chiesi: (a) cash discounts allowed and actually taken; (b) taxes on sales (such as sales or use taxes) to the extent added to the sale price and set forth separately as such in the total amount invoiced; (c) freight and insurance to the extent added to the sale price and set forth separately as such in the total amount invoiced; (d) amounts repaid or credited by reason of rejections, defects, recalls, expirations, or returns; and (e) any governmental mandated charge backs, rebates, and discounts. No deductions shall be made for (x) commissions paid to individuals, whether they are with independent sales agencies or regularly employed by Chiesi or any of its

Affiliates, and on its payroll, (y) the cost of collections, and (z) any advertising and promotional expenses. In no event shall Chiesi have a right to apply any discounts or deductions on the Product, resulting from Chiesi entering into "package deals" whereby Chiesi sells more than one product (in addition to the Product) to a customer and offers "package deal discounts".

1.61 "Non-Controlling Party" has the meaning set forth in Section 7.5(b).

1.62 "Party" and "Parties" has the meaning set forth in the first and opening paragraph of this Agreement.

1.63 "Patents" shall mean any patent or patent application, including utility patents, utility models, design patents, provisional applications, certificates of invention, and all divisionals, continuations, continuations-in-part, substitutions, reissues, reexaminations, renewals, extensions (including any supplemental protection certificate) or additions to any patent or patent application that Cover the Product owned or Controlled by either of the Parties as of the Effective Date or during the Term. Schedule 1.63 sets forth a list of Patents that Cover the Product in the Territory owned or Controlled by uniQure as of the Effective Date, such list to be updated or confirmed upon the date this Agreement has become effective pursuant to Section 9.1(b).

1.64 "Person" shall mean any natural person or any corporation, company, partnership, limited liability company, joint venture, firm, agency or other entity, including a Party.

1.65 "Price and Reimbursement Approval" shall mean any approval or authorization of any Regulatory Authority establishing a pricing- and payment scheme or a reimbursement scheme for the Product in any country or jurisdiction of the Territory.

1.66 "Product" shall mean the medicinal product set forth in Schedule 1.66, and any Improvements thereof.

1.67 "Product Complaint" shall mean any oral or written communication of dissatisfaction issued by any Regulatory Authority regarding the identity, quality, durability, reliability or performance of any Product, including appearance, low fills, foreign materials, foreign product, defective packaging or defective labeling.

1.68 "Profit" has the meaning set forth in Section 2.6.

1.69 "Publishing Party" has the meaning set forth in Section 10.5(a).

1.70 "Purchase Price" has the meaning set forth in Section 2.3(b).

1.71 "Quality Agreement" has the meaning set forth in Section 3.3(a).

1.72 "Registry" shall mean an organized system that uses observational study methods to collect uniform data (clinical and other) to evaluate specified outcomes for a population defined by a particular disease, condition, or exposure, and that serves one or more predetermined scientific, clinical, or policy purposes and meets the requirements of the EMA.

1.73 "Regulatory Approval" shall mean any and all approvals (including, where required, any applicable Price and Reimbursement Approvals), licenses, registrations or authorizations of any Regulatory Authority necessary for the Commercialization or use of a Product in a country or jurisdiction, including Marketing Authorizations.

1.74 "Regulatory Authority" shall mean any federal, national, multinational, state, provincial or local regulatory agency, department, bureau or other governmental entity with authority over the testing, Regulatory Approval, manufacture, use, storage, import, promotion, marketing or sale of a drug or biologic product in a country or jurisdiction, including the EMA.

1.75 "Regulatory Plan" has the meaning set forth in Section 3.2.

1.76 "Required Manufacturing Changes" has the meaning set forth in Section 3.4(a).

1.77 "SDEA" has the meaning set forth in Section 3.3(b).

1.78 "Specifications" shall mean the composition, quality and specifications regarding the Product as may be amended, modified or supplemented from time to time in accordance with the terms hereof. The initial Specifications are annexed as Schedule 1.78.

1.79 "Sub-distributor" shall mean a Third Party that is granted a sub-distribution or other Commercialization right in the Territory by Chiesi in accordance with this Agreement.

1.80 "Subject Disclosure" has the meaning set forth in Section 10.3(b).

1.81 "Target Price" has the meaning set forth in Schedule 8.1(a).

1.82 "Term" has the meaning set forth in Section 9.1(a).

1.83 "Territory" shall mean (i) the EU Member States, Iceland, Liechtenstein and Norway and (ii) Albania, Andorra, Bosnia, Croatia, Macedonia, Monaco, Montenegro, Republic of San Marino, Serbia (including Kosovo), Switzerland and Vatican City ((i) and (ii), collectively, "Territory A") as well as (iii) Algeria, Brazil, China, Egypt, Mexico, Morocco, Pakistan, Russia and ex-CIS countries (i.e. Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kirghizstan, Moldova, Tajikistan, Turkmenistan, Ukraine and Uzbekistan), Tunisia and Turkey ("Territory B").

1.84 "Territory A" has the meaning set forth in Section 1.83.

1.85 "Territory B" has the meaning set forth in Section 1.83.

1.86 "Third Party" shall mean any Person other than uniQure, Chiesi, or their respective Affiliates.

1.87 "Trademark" has the meaning set forth in Section 2.2(a)(i).

1.88 "uniQure" has the meaning set forth in the first and opening paragraph of this Agreement.

1.89 "uniQure Intellectual Property Rights" shall mean all Intellectual Property Rights Controlled by uniQure on the Effective Date or during the Term which would be infringed by the Commercialization of the Product as provided for in this Agreement.

1.90 "Valid Claim" shall mean any claim within an issued and unexpired Patent or within a pending Patent application that (i) is not expired, lapsed, or abandoned, (ii) is not dedicated to the public, disclaimed, or admitted to be unenforceable or invalid; and (iii) has not been invalidated, held unenforceable or cancelled by a court or administrative agency of competent jurisdiction in an order or decision from which no appeal has been or can be taken, including through opposition, re-examination, reissue, disclaimer or otherwise.

1.91 "Interpretation". Any reference in this Agreement to an Article, Section, subsection, paragraph, clause, or Schedule shall be deemed to be a reference to any Article, Section, subsection, paragraph, clause, or Schedule, of or to, as the case may be, this Agreement. Except where the context clearly otherwise requires, (a) wherever used, the use of any gender will be applicable to all genders, (b) the singular shall include the plural and vice versa, (c) any definition of or reference to any agreement, instrument or other document refers to such agreement, instrument other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein or therein), (d) any reference to any Applicable Laws refers to such Applicable Laws as from time to time enacted, repealed or amended, (e) the words "herein", "hereof" and "hereunder", and words of similar import, refer to this Agreement in its entirety and not to any particular provision hereof, (f) the words "include", "includes" and "including" are deemed to be followed by the phrase "but not limited to", "without limitation" or words of similar import, (g) the word "or" has the inclusive meaning (i.e., "and/or"), (h) the word "day" means a calendar day, the word "month" means a calendar month, and the word "year" means, and the word "annual" refers to, a calendar year, (i) the word "quarterly" refers to a calendar quarter, (j) each accounting term used herein that is not specifically defined herein has the meaning given to it under the International Financial Reporting Standards, and (k) the captions or headings of the Schedule, Articles, Sections or other subdivisions hereof are inserted only as a matter of convenience or for reference and shall have no effect on the meaning of the provisions hereof.

ARTICLE II
APPOINTMENT, SUPPLY OF PRODUCTS

2.1 Appointment, Consideration.

(a) Subject to the terms hereof, uniQure hereby appoints Chiesi as its distributor with the exclusive right to Commercialize the Product solely in the Field in the Territory during the Term.

(b) Chiesi shall be entitled to appoint any of its Affiliates or, subject to the prior written consent of uniQure, which shall not be unreasonably withheld, Third Parties as sub-distributor to the extent required for Commercialization of the Product in the Field in the Territory. In this event, Chiesi shall procure, and shall remain ultimately responsible for, compliance by such Affiliates or Sub-distributors with all the relevant obligations of Chiesi hereunder.

(c) (1) Subject to the condition precedent pursuant to Section 9.1(b), Chiesi shall pay to uniQure, after receipt of a proper invoice, a one-time, non-refundable fee of EUR 2,000,000.00 (in words: two million Euro) in recognition of uniQure's past expenditure developing the Product, within ten (10) Business Days after this Agreement has become effective pursuant to Section 9.1(b).

(c) (2) In consideration of the licenses, rights and interest granted under this Agreement, and in addition to any other payments due hereunder, Chiesi shall pay to uniQure, after receipt of a proper invoice, the following commercial milestone payments, in each case within [†] days after the end of the corresponding calendar year:

(A) EUR [†] (in words: [†] Euro) when cumulated Net Sales of the Product achieve EUR [†] (in words: [†] Euro) in a calendar year;

(B) EUR [†] (in words: [†] Euro) when cumulated Net Sales of the Product achieve EUR [†] (in words: [†] Euro) in a calendar year;

(C) EUR [†] (in words: [†] Euro) when cumulated Net Sales of the Product achieve EUR [†] (in words: [†] Euro) in a calendar year;

(D) EUR [†] (in words: [†] Euro) when cumulated Net Sales of the Product achieve EUR [†] (in words: [†] Euro) in a calendar year.

Within [†] days after the end of each calendar year, Chiesi shall inform uniQure of the occurrence or, as the case may be, non-occurrence, of any such milestone event.

For the avoidance of doubt, each milestone is payable once, up to a maximum of EUR [†] (in words: [†] Euro) in milestone payments and only one milestone is payable for any given calendar year. For clarity, the highest unpaid payment possible shall be paid with respect to a particular calendar year, and any payment not made because a higher payment was due shall be available for payment if the relevant Net Sales threshold is achieved in a subsequent year. For example,[†].

(d) Chiesi shall keep complete and accurate records of Product sold or otherwise made available as appropriate to determine the amount of commercial milestones and other payments to be paid to uniQure. These records shall be retained for at least [†] years after delivery of the Product pursuant to Section 2.5. uniQure shall have the right [†] at uniQure's expense to retain an independent certified public accountant selected by uniQure, and reasonably acceptable to Chiesi, to review such records in the location(s) where such records are maintained by Chiesi upon reasonable notice and during regular business hours and under obligations of confidence. Results of such review shall be made available to both Parties. If the review indicates that there was an underpayment of any amount payable to uniQure, the amount of such underpayment shall be remitted to uniQure within [†] days after such review, together with interest calculated in the manner provided in paragraph (f) below. If the underpayment is equal to or greater than [†] percent ([†]%) of the amount that was otherwise due, Chiesi shall pay all of uniQure's reasonable out-of-pocket expenses of such review. If the review indicates that there was an overpayment of any amounts by Chiesi, Chiesi may apply the amount of such overpayment to any future payment due to uniQure under Section 2.3.

(e) All payments to be made under this Agreement shall be made in EUR by wire transfer to the account designated by uniQure in writing. If amounts (e.g. Average Net Sales Price or Fully Loaded Cost of Goods) relevant for the calculation of any payments to be made under this Agreement are in a currency other than Euros, such amounts shall be expressed in their Euro equivalent, calculated[†] to which the applicable amounts relate using the currency converter at www.oanda.com. Unless otherwise expressly set forth herein, all payments to uniQure are to be executed without any further deduction within [†] days after receipt by Chiesi of the invoice with respect thereto.

(f) Any payment to uniQure under this Agreement that is not paid on or before the date such payment is due shall bear interest at the lesser of (i) [†]per year, or (ii) the highest rate permitted by Applicable Laws, calculated on the number of days such payments are overdue.

(g) Any payment to be made under this Agreement shall be made plus value-added tax, if applicable.

(h) To the extent that any payments hereunder by Chiesi to uniQure are subject to tax, Chiesi shall pay such tax; provided, however, that, with respect to any payments subject to withholding tax, Chiesi shall pay the applicable withholding tax amount to the relevant taxing authority and promptly provide uniQure with all necessary documentation for uniQure to recover such tax. Chiesi will take all reasonable and lawful steps to minimize the amount of any such withholding tax obligation and uniQure shall promptly provide all information and documentation in its possession necessary for doing so.

2.2 Trademark, Labeling.

(a) *Trademark*.

(i) The Product will be Commercialized by Chiesi in the Field in the Territory exclusively under the trademark "Glybera" (as defined in Schedule 2.2(a)) or, subject to the prior written consent of uniQure, such alternative trademark identified by Chiesi (the "Trademark"). In the event that Chiesi provides sufficient written evidence to uniQure that the use of an alternative trademark is required under Applicable Laws to lawfully Commercialize the Product in any country or jurisdiction of the Territory and if Chiesi identifies any trademark other than "Glybera" for this purpose, then Chiesi shall be entitled to Commercialize the Product under such alternative trademark without the prior written consent of uniQure. In the event that Chiesi identifies any trademark other than "Glybera" for other material commercial reasons, Chiesi shall provide sufficient written evidence for such reasons to uniQure and shall not be entitled to Commercialize the Product under an alternative Trademark without the prior written consent of uniQure, such consent not to be unreasonably withheld. Chiesi shall inform uniQure promptly of the need of such alternative trademark, such notice to be accompanied by the aforementioned written evidence and a list of at least [†] alternative trademarks identified by Chiesi and suitable for Commercialization of the Product throughout the entire Territory.

(ii) In case the Product is Commercialized by Chiesi under the Trademark "Glybera", uniQure hereby grants to Chiesi the exclusive, royalty-free, perpetual, irrevocable, right and license (subject to Section 9.3 below) to use the Trademark "Glybera" to Commercialize the Product solely in the Field in the Territory, with the right to grant sublicenses to Sub-distributors according to Section 2.1(b). Further, uniQure hereby grants to Chiesi the non-exclusive, royalty-free, right and license to use uniQure's trade name (as defined in Schedule 2.2(a)) in each country of the Territory during the Term solely for the purpose of identifying uniQure as the manufacturer and Marketing Authorization holder of the Product as contemplated in this Agreement.

(iii) Chiesi acknowledges that, subject to the foregoing licenses, uniQure shall own all right, title and interest in and to the Trademark "Glybera" inside and outside the Field, whether inside or outside of the Territory as well as any goodwill associated with the Trademark "Glybera". Chiesi shall ensure appropriate use of the trademark "Glybera" at all times in the entire Territory and observe the applicable trademark use guidelines issued by uniQure, as amended from time, attached in Schedule 2.2(b). Chiesi shall not, during the Term or thereafter, register, use, or attempt to obtain any right in and to (A) the trademarks "Glybera" and "uniQure", or (B) any name, logo or trademark confusingly similar thereto. If Chiesi or any of its Affiliates or Sub-distributors challenges the validity of any such trademark during the Term, uniQure may terminate this Agreement in accordance with the provisions of Section 9.2(d). uniQure undertakes to maintain and defend the Trademark "Glybera" in each country

inside the Territory during and, for as long as Chiesi retains licenses thereto, after the Term at its own cost. In the event that at any time during such term uniQure intends not to continue prosecution or maintenance of such Trademark anywhere inside the Territory, it shall inform Chiesi at least [†] days prior to doing so and shall, upon request of Chiesi transfer all right, title and interest in such Trademark in such country or jurisdiction to Chiesi for further prosecution and maintenance by Chiesi in Chiesi's name and at Chiesi's costs and Chiesi shall reimburse uniQure for any reasonable external costs incurred by uniQure for such transfer.

(iv) uniQure acknowledges that except as otherwise expressly provided in this Agreement, Chiesi shall own all right, title and interest in and to any Trademark other than the trademark "Glybera" as well as any goodwill associated therewith. In case the Product is Commercialized by Chiesi under such alternative Trademark, Chiesi hereby grants to uniQure an exclusive, royalty-free, perpetual, irrevocable, right and license (subject to Section 9.3 below) to use such Trademark to Manufacture and Commercialize the Product outside the Territory, with the right to grant sublicenses. uniQure shall not, during the Term or thereafter, register, use, or attempt to obtain any right in and to (A) such Trademark and the "Chiesi" trademark, or (B) any name, logo or trademark confusingly similar thereto. If uniQure or any of its Affiliates challenges the validity of any such trademark during the Term, Chiesi may terminate this Agreement in accordance with the provisions of Section 9.2(d). Chiesi undertakes to obtain, maintain and defend such Trademark in each country inside and, as requested by uniQure, outside of the Territory during and, for as long as uniQure retains licenses thereto, after the Term at its own cost. In the event that at any time during such term Chiesi intends not to continue prosecution or maintenance of such Trademark anywhere inside or outside of the Territory it shall inform uniQure at least [†] days prior to doing so and shall, upon request of uniQure transfer all right, title and interest in such Trademark in such country or jurisdiction to uniQure for further prosecution and maintenance by uniQure in uniQure's name and at uniQure's costs and uniQure shall reimburse Chiesi for any reasonable external costs incurred by Chiesi for such transfer.

(b) *Labeling*.

(i) uniQure as Marketing Authorization holder of the Product in Territory A shall be ultimately responsible for the content and type of all labeling and packaging (and any changes or supplements thereto) for the Product to be Commercialized by Chiesi in the Field in Territory A. Notwithstanding the foregoing, the Parties agree that, subject to Section 3.1, (A) Chiesi shall provide all reasonable assistance to uniQure in connection with the labeling and packaging for the Product (e.g. use of Chiesi in-house capacity for the translation of package leaflets), and (B) the Product to be Commercialized by Chiesi in the Field in Territory A shall include, to the extent legally permitted, a reference to Chiesi as Commercialization partner, and shall take into account, to the extent legally permitted, Chiesi's livery. Details shall be agreed upon between the Parties in the Regulatory Plan. Chiesi shall take out at its costs any necessary insurance required under Applicable Laws as a result of Chiesi being referred to as a Commercialization partner on the Product, and [†]Product in accordance with the foregoing.

(ii) Chiesi as Marketing Authorization holder of the Product in Territory B shall be ultimately responsible for the content and type of all labeling and packaging (and any changes or supplements thereto) for the Product to be Commercialized by Chiesi in the Field in Territory B. Notwithstanding the foregoing, the Parties agree that, subject to Section 3.1, (A) uniQure shall provide all reasonable assistance to Chiesi in connection with the labeling and packaging for the Product, and (B) the Product to be Commercialized by Chiesi in the Field in Territory B shall include, to the extent legally permitted, a reference to uniQure as originator and manufacturer of the Product, and shall take into account, to the extent legally permitted, uniQure's livery. Details shall be agreed upon between the Parties in the Regulatory Plan. uniQure shall take out at its costs any necessary insurance required under Applicable Laws as a result of uniQure being referred to as originator and manufacturer on the Product, and [†]in accordance with the foregoing.

(iii) If, according to local mandatory regulatory requirements, uniQure is not eligible as Marketing Authorization holder of the Product in any country of Territory A, or Chiesi is not eligible as Marketing Authorization holder of the Product in any country of Territory B, Chiesi or, as the case may be, its Sub-distributor, or uniQure, shall become the Marketing Authorization holder of the Product in such country of the Territory. In such case, Chiesi or, as the case may be, its Sub-distributor, or uniQure, shall be ultimately responsible for the content and type of all labeling and packaging (and any changes or supplements thereto) for the Product to be Commercialized by Chiesi in the Field in such country of the Territory, and sentences 2 to 4 of paragraph (i) or (ii) above shall apply, respectively.

2.3 Purchase of the Product.

(a) *Orders*. During the Term, Chiesi shall purchase from uniQure one hundred percent (100%) of Chiesi's requirements for the Product for Commercialization in the Field in the Territory. Purchase shall be made pursuant to Firm Orders submitted by Chiesi to uniQure from time to time in accordance with Section 2.4.

(b) *Purchase Price*. The purchase price for the individual Product ordered shall be the greater of (i) [†] percent ([†]%) of the Average Net Sales Price of a particular Product and (ii) the Fully Loaded Cost of Goods plus [†] percent ([†]%) markup for each patient dose sold of such particular Product (the "Purchase Price").

(c) *Invoicing, Payment*. uniQure shall invoice Chiesi for all quantities of Product as follows:

(i) As upfront payment to the Purchase Price, Chiesi shall pay to uniQure the Fully Loaded Cost of Goods, reduced by the cost items incurred by uniQure only after receipt of the corresponding Delivery Notification as identified in Schedule 2.3, for each patient dose of the Product delivered (i.e. through storage at uniQure's warehouse) in accordance with Section 2.4 ("Glybera Manufacturing Cost Reimbursement"). uniQure shall promptly inform Chiesi of the occurrence of each such event.

(ii) Chiesi shall pay the difference between the Purchase Price and the Glybera Manufacturing Cost Reimbursement within [†] days following the delivery of a particular patient dose of the Product in accordance with Section 2.5.

(iii) Section 2.1(e) to (h) shall apply.

2.4 Forecasts; Firm Orders.

(a) *Forecasts*. Chiesi shall provide uniQure a non-binding forecast by 31 March 2013, detailing the quantity of Product required for 2013. Every [†] months thereafter (i.e. no later than [†]) Chiesi shall provide uniQure a non-binding forecast detailing the quantity of Product per quarter required for the respective following [†] ([†]) months period. Chiesi shall make all forecasts in good faith given market and other information available to Chiesi.

(b) *Firm Orders*. Chiesi shall purchase the Product solely by Firm Orders. Firm Orders consist of the number of patient doses for a period of [†] months specified per month. Chiesi shall submit each such Firm Order to uniQure at least [†] months in advance of the anticipated release date as specified in each Firm Order. Chiesi shall submit Firm Orders for the Product [†] times per calendar year no later than [†]. Notwithstanding the foregoing and the condition precedent set forth in Section 9.1(b), Chiesi shall submit the first Firm Order no later than [†] days after the Effective Date. Any terms or conditions contained in any Firm Order, acknowledgment, invoice, bill of lading, acceptance, or other writing or document issued by either Party, whether or not in conflict with the terms of this Agreement, shall be null and void without further notice required to be given by the other Party.

(c) *Order Processing*. In order to become effective, each Firm Order placed by Chiesi shall be confirmed by uniQure by facsimile or email showing the confirmed quantity indicated in each Firm Order and delivery (i.e. through storage at uniQure's warehouse) date of the Product within [†] Business Days of receipt (the "Confirmed Firm Order"), provided that, if uniQure does not provide an acknowledgment of the Confirmed Firm Order within such period, uniQure shall be deemed to have confirmed the corresponding Firm Order. uniQure shall not be obliged to accept and fulfill any Firm Orders which exceed [†]percent ([†]%) of the Product quantity indicated in each relevant forecast. uniQure shall ensure availability of confirmed quantities of the Product within [†] months after uniQure's receipt of the corresponding Firm Order, provided, however, that in case a Firm Order exceeds [†] percent ([†]%) of the Product quantity indicated in each relevant forecast for the relevant period, and uniQure accepts such Firm Order, uniQure and Chiesi shall agree to a new release date and uniQure shall be entitled to release any amounts of Product exceeding the above threshold within [†] months after uniQure's receipt of such Firm Order. uniQure shall store such Product at uniQure's warehouse at [†] cost.

(d) *Batch Sizes*. All quantities of Product ordered by Chiesi shall be consistent with uniQure's current minimum batch sizes for the applicable Product (the "Minimum Order Quantity"), or multiples thereof, as set forth in Schedule 2.4(d). Notwithstanding the foregoing, uniQure agrees to support and cooperate with Chiesi to

accept, fulfill and deliver order quantities at amounts less than the Minimum Order Quantity, in the event that Chiesi's good faith internal evaluations or the requirements of customers for the Product support or require smaller quantity Firm Orders.

2.5 Shipment and Delivery.

(a) *Terms*. Within [†] Business Days following receipt of a Delivery Notification from Chiesi, UniQure shall manufacture the finished dosage form of the Product for the quantities specified in the Delivery Notification (not to exceed the quantities in the respective Confirmed Firm Order), and ship such quantities of Product directly to the customers of Chiesi, together with a corresponding invoice to Chiesi. The Parties shall agree, after [†], on a reduction of the [†] Business Day period set forth above. All quantities of Product shall be delivered EXW uniQure's facility in Amsterdam. Chiesi shall obtain [†] all necessary export or import licenses and permits to export or import the relevant quantities of the Product into the relevant country or jurisdiction of the Territory. Title and risk of loss and damage for any Product delivered pursuant to this Agreement shall pass to Chiesi at the time the same are tendered by uniQure to the carrier for delivery to Chiesi's customers. uniQure shall pack Product for shipment in accordance with uniQure's standard procedures and Applicable Laws, unless otherwise specified in writing by Chiesi within the scope of mandatory Applicable Laws [†] days prior to such shipment, in which event [†].

(b) *Delivery Notification*. For each supply of Product to each of its customers, Chiesi shall ensure and confirm to uniQure in writing (each a "Delivery Notification") that (i) the Product has obtained Price and Reimbursement Approval in the relevant part of the Territory, except for [†] until the relevant Price and Reimbursement Approval has been obtained, and (ii) the healthcare professionals involved in the treatment of a patient have received the educational pack and the patient to be treated with the supplied Product is included in the Registry.

(c) *Release*. uniQure shall perform release testing pursuant to the Specifications and in accordance with uniQure's standard procedures regarding the Manufacturing of Product. After each shipment of Product, uniQure shall release the Product and provide to Chiesi a Certificate of Analysis and a Certificate of Compliance and such other documents as may be required by Applicable Laws or mutually agreed by the Parties.

(d) *Minimum Remaining Shelf-life and Returns*. Product returns shall be the sole responsibility of Chiesi and uniQure shall have no obligation with respect to any such returned Product, provided that the releasing Qualified Person should be informed of return and final disposition and all Products supplied by uniQure hereunder shall have a minimum remaining shelf life upon delivery equal to no less than [†] of the shelf-life set forth in the relevant Specifications or such longer period as required by a relevant customer in the Territory.

2.6 Failure to Supply.

(a) In the event that it becomes apparent to uniQure that it will be unable to fulfill any Confirmed Firm Order for the Product ("Failure to Supply"), uniQure shall, immediately after learning of such event or circumstances, notify Chiesi in writing of uniQure's Failure to Supply, along with a reasonable explanation of the reason, to the extent then known to uniQure, for uniQure's Failure to Supply and with a specific indication of the quantity of Product affected by such Failure to Supply and anticipated timing of delivery of the Product. Promptly after Chiesi's receipt of any such notice, the Parties shall agree upon mutually acceptable revised quantities and delivery dates with respect to the Product subject to such Confirmed Firm Order or, to the extent this is not possible in light of the specific or then unknown reason for uniQure's Failure to Supply, shall discuss in good faith measures to further investigate the root cause and, as the case may be, appropriate steps to overcome such Failure to Supply.

(b) Notwithstanding paragraph (a), in the event that Chiesi cannot fulfill any firm orders for the Product received from any Third Parties as a consequence of uniQure's Failure to Supply, except if such Failure to Supply is caused as a result of any Force Majeure Event, then Chiesi shall be entitled to an indemnification payment equal to[†]. Any indemnification payment made to Chiesi under this paragraph for Failure to Supply shall be reimbursed in full to uniQure, [†]. Such indemnification payments and reimbursements, if any, shall be calculated on a calendar year basis, such calculation to be made within [†] days after the end of the corresponding calendar year and any resulting amount to be paid within [†] days after such calculation has been made. uniQure, in relying on the above Force Majeure Event exceptions, shall provide reasonably detailed particulars of the reasons underlying any such Force Majeure Event to Chiesi and shall[†].

(c) For the purpose of this Section 2.6, "Profit" shall be calculated, on a per Product basis, as the difference between (a) [†] and (b) [†] calculated as per Section [†], and "Lost Profit" shall mean the[†].

(d) Without prejudice to the foregoing paragraphs (a) to (c), if

(i) uniQure's Failure to Supply affects at least [†]consecutive Confirmed Firm Orders for a period of no less than [†]months, and

(ii) the reason for uniQure's Failure to Supply could be established during the Parties' discussion pursuant to paragraph (a) above, and such reason was specifically related to uniQure's ability to Manufacture the Product at its current manufacturing site (i.e. the Failure to Supply could reasonably be expected to be overcome if the Product was Manufactured at a different manufacturing site),

upon either Party's request, the Manufacturing of the Product shall be transferred to (A) uniQure's US manufacturing site, provided such site is operational at the relevant point in time, and further provided uniQure, within [†] following such request, does not opt against such transfer, and (B) otherwise (i.e. if uniQure opts against such transfer within the foregoing [†]period) to any other Third

Party manufacturer mutually agreed to by uniQure and Chiesi. uniQure shall efficiently and promptly transfer to its US manufacturing site or, as the case may be, such Third Party manufacturer all information, licenses and rights controlled by uniQure and necessary to Manufacture and supply the Product to Chiesi hereunder during the continuance of uniQure's Failure to Supply. Such transfer shall ensure uniQure's ongoing control over the information, licenses and right so transferred, shall include the steps outlined in Schedule 2.6, and shall occur through email and videoconference interactions, as well as face-to-face meetings as required to ensure efficient transfer of technologies and capabilities.

If uniQure's US manufacturing site or, as the case may be, such Third Party manufacturer is unable to Manufacture the Product within [†]months after uniQure has started the technology transfer to such person, Chiesi shall have the right to terminate this Agreement with [†]month notice in writing, except if uniQure's Failure to Supply is caused as a result of a Force Majeure Event. Such termination shall not become effective if, during such [†] month notice period, uniQure has notified Chiesi of the ability of its US manufacturing site or, as the case may be, such Third Party manufacturer to Manufacture the Product. Upon termination of this Agreement by Chiesi pursuant to this Section 2.6(d), the provisions of Section 9.3(b) (i), (ii) and (iv) shall apply.

(e) Without prejudice to the foregoing paragraphs (a) to (c), if

(i) uniQure's Failure to Supply affects at least [†]consecutive Confirmed Firm Orders for a period of no less than [†] months, and

(ii) the reason for uniQure's Failure to Supply (A) could be established during the Parties' discussion pursuant to paragraph (a) above, but such reason was not specifically related to uniQure's ability to Manufacture the Product at its current manufacturing site (i.e. the Failure to Supply could not reasonably be expected to be overcome if the Product was Manufactured at a different manufacturing site), or (B) could not be established during the Parties' discussion pursuant to paragraph (a) above during at least the foregoing [†] months period, and

(iii) uniQure's Failure to Supply is not caused as a result of a Force Majeure Event,

Chiesi may terminate this Agreement with [†] month notice in writing. Such termination shall not become effective if, during such [†] month notice period, uniQure has notified Chiesi of the end of its Failure to Supply and has provided to Chiesi at least one of the outstanding Confirmed Firm Orders. Upon termination of this Agreement by Chiesi pursuant to this Section 2.6(e), the provisions of Section 9.3(b) (i), (ii) and (iv) shall apply.

(f) Without prejudice to the foregoing paragraphs (a) to (e), if within [†] months after uniQure has notified Chiesi in writing of uniQure's Failure to Supply, any Person is unable to Manufacture and supply the Product to Chiesi hereunder, then for any possible future supply of the Product to Chiesi hereunder, the percentage set out in Section 2.3(b)(i) above shall be reduced to [†] for any individual Product ordered

after the end of uniQure's Failure to Supply for a period equivalent to the duration of uniQure's Failure to Supply (i.e. if uniQure's Failure to Supply lasted for [†] months, the reduced percentage of [†] shall apply to any individual Product ordered during the sixty [†] period after the end of uniQure's Failure to Supply).

ARTICLE III
QUALITY, REGULATORY AND PHARMACOVIGILANCE MATTERS

3.1 Permits.

(a) uniQure shall be responsible for any filing, holding and maintenance associated with all Marketing Authorizations for the Product in Territory A, and Chiesi shall be responsible for any filing, holding and maintenance associated with all Marketing Authorizations for the Product in Territory B. Notwithstanding the foregoing, if, according to local mandatory regulatory requirements, uniQure is not eligible as Marketing Authorization holder of the Product in any country of Territory A, or Chiesi is not eligible as Marketing Authorization holder of the Product in any country of Territory B, Chiesi or, as the case may be, its Sub-distributor, or uniQure, shall become the Marketing Authorization holder of the Product in such country of the Territory. Details regarding each Party's responsibilities and obligations and the exchange of information in the process of filing, holding and maintaining any Marketing Authorizations for the Product in the Territory shall be agreed upon between the Parties in the Regulatory Plan. Notwithstanding the foregoing and except as otherwise set forth in this Agreement, including the Regulatory Plan, the Quality Agreement and the SDEA, each Party shall, at such Party's sole cost and expense, maintain in full force and effect all other Regulatory Approvals required by Applicable Laws to carry out such Party's duties and obligations under this Agreement.

(b) Without prejudice to the generality of paragraph (a) above, (i) [†]the cost associated with the Registry in the EU, the PIP (Pediatric Investigation Plan) and any Phase IV clinical study regarding the Product mutually agreed between the Parties, (ii) uniQure shall be responsible for any filing, holding and maintenance fees associated with Marketing Authorizations and Marketing Authorization Applications in Territory A, including in the countries outside of the EU Member States, as further agreed between the Parties during the Term in accordance with Schedule 3.1, CMC (Chemistry, Manufacturing, and Controls), and pharmacovigilance regarding the Product in the Territory (except for the Registry), and (iii) Chiesi shall be responsible for any filing, holding and maintenance fees associated with Marketing Authorizations and Marketing Authorization Applications in Territory B as further agreed between the Parties during the Term in accordance with Schedule 3.1, any changes (other than Required Manufacturing Changes and Discretionary Manufacturing Changes which are governed by Section 3.4 below) Chiesi shall request with respect to the Product, and reporting of safety data regarding the Product in Territory B.

3.2 Regulatory Plan and Responsibility. The Parties shall adopt a regulatory plan relating to the Product (the "Regulatory Plan") a draft of which shall be attached as Schedule 3.2 and which shall be finalized by the Parties as soon as possible after the Effective Date, but in any event within [†] thereafter. The Regulatory Plan shall be approved by the JCC and may be updated from time to time through the JSC or the JCC.

3.3 Quality Agreement and Safety Data Exchange Agreement.

(a) As soon as possible after the Effective Date, but in any event within [†]days after the Effective Date, the Parties shall enter into a quality agreement regarding the Product (the "Quality Agreement"), whereby the Parties shall define their respective responsibilities in relation to GDPs and quality matters, Specifications, release and supply of the Product. In the event of a conflict between the terms of this Agreement and the Quality Agreement, the terms of this Agreement shall govern.

(b) Without prejudice to the generality of Section 3.1(b) above, as soon as possible after the Effective Date, but in any event within [†] days after the Effective Date, the Parties shall enter into a safety data exchange agreement (the "SDEA") that defines the roles and responsibilities of each Party in terms of pharmacovigilance and the detailed safety exchange required to permit compliance by each Party with safety reporting requirements to Regulatory Authorities in the Territory. In the event of a conflict between the terms of this Agreement and the SDEA, the terms of this Agreement shall govern.

3.4 Change Management.

(a) For changes to the Specifications or Manufacture processes of the Product that are required by Applicable Laws in the Territory (collectively, "Required Manufacturing Changes"), uniQure and Chiesi shall cooperate in making such changes in a timely manner.

(b) For changes to the Specifications or Manufacture processes of the Product that are not Required Manufacturing Changes (collectively, "Discretionary Manufacturing Changes"), uniQure and Chiesi must each agree in writing to any Discretionary Manufacturing Changes before such change is implemented, provided that neither Party shall unreasonably withhold its consent to such Discretionary Manufacturing Changes.

(c) Unless otherwise agreed between the Parties, through the JSC or JCC, uniQure's quality system, as further defined in the Quality Agreement, shall be utilized by the Parties in reviewing and implementing any changes under this Section 3.4.

(d) The commercially reasonable costs, including obsolete raw materials, work-in-process, product packaging and labeling materials, (i) associated with Required Manufacturing Changes shall be shared equally between uniQure and Chiesi, and (ii) associated with Discretionary Manufacturing Changes shall be borne by the Party initiating such changes.

3.5 Stability Testing; Validation. uniQure shall perform stability testing, process validation or cleaning validations with respect to the Product in accordance with uniQure's standard procedures, as further defined in the Quality Agreement, and Applicable Laws. Any additional testing[†].

3.6 Recalls; Product Complaints.

(a) uniQure shall have the sole authority and responsibility to respond to any Regulatory Authority, to respond to Product Complaints and to handle all recalls and market withdrawals of the Product in accordance with Applicable Laws, provided, that in all cases, unless otherwise required to comply with any Applicable Laws or any decision, order, request or directive of a Regulatory Authority, Chiesi shall release no communication into the marketplace regarding such Product Complaints, recalls or market withdrawals without first obtaining uniQure's consent to such communication, which shall not be unreasonably withheld. Other complaints related to the Product, in particular complaints not related to regulatory matters, shall be managed solely by Chiesi.

(b) Each Party shall promptly (but in any case, not later than [†] Business Days) notify the other Party in writing of any decision, order, request or directive of a Regulatory Authority to recall, withdraw or field correct any Product. UniQure shall promptly (but in any case, not later than [†] Business Days) notify Chiesi of any voluntary decision to recall, withdraw or field correct any Product. uniQure shall be solely responsible for determining whether to issue a recall, withdrawal, or field correction (but shall comply with all Applicable Laws in making such determination) and for the cost and expense of any such recall, withdrawal or field correction; provided, that uniQure shall give due consideration to all comments timely made by Chiesi relating to the Manufacture or testing of the Product and shall notify Chiesi in writing if uniQure declines to address any such comments, stating the reason therefor. If any recall, market withdrawal or field correction is not due to uniQure's Manufacture of the Product, then uniQure shall be relieved of uniQure's obligations to supply the Product hereunder until the cause of such recall, withdrawal or field correction has been resolved to the satisfaction of the Parties and the applicable Regulatory Authority, and during such period such relief shall be deemed a Force Majeure Event for the purposes of this Agreement.

(c) Notwithstanding the foregoing paragraphs (a) and (b), but without prejudice to any obligations of uniQure under mandatory Applicable Laws, to the extent possible with view to any timelines applicable under Applicable Laws, the Parties, through the JSC or JCC, shall mutually discuss any of the foregoing events (i.e. response to any Regulatory Authority, response to Product Complaints, recalls, market withdrawals, field corrections) and agree on a joint communication in relation to such event both to any Regulatory Authority and the marketplace taking into account both the regulatory and commercial implications associated with such event and communication.

3.7 Notice of Government Inspections. Each Party agrees that, to the extent such Party becomes aware of the results, observations or outcome of any inspections or audits of the facilities or operations involved in the Manufacture or Commercialization of the Product conducted by a Regulatory Authority, such Party will notify the other Party of any such information as it directly relates to the Product within [†] Business Days after obtaining the information and shall provide the other Party with a copy of any written

materials provided by the Regulatory Authority in connection with such inspection or audit. Each Party will provide the other with copies of reports of quality audits conducted by such Party with respect to the Product and will apprise the other Party of material Manufacture, marketing, promotion, sales, or other issues affecting supply or Commercialization of the Product.

3.8 Government Inquiries. If either Party shall be contacted by any Regulatory Authority for any regulatory purpose pertaining specifically to this Agreement or to the Product, such Party shall immediately notify the other Party. Either Party may permit unannounced inspections of the Product or facilities by a Regulatory Authority with competent jurisdiction and may respond to the extent necessary to comply with such Party's obligations under Applicable Laws.

3.9 Inspections / Audit of Records and Facilities. Unless otherwise required by Applicable Laws or any decision, order, request or directive of a Regulatory Authority, once annually(or in case of uniQure's facilities being inspected, up to [†]times[†], for a period of no more than [†] Business Days and by no more than [†] designated personnel, each Party shall have reasonable access during normal business hours to the other Party's regulatory files as they relate to the Manufacture and Commercialization of the Product in the Territory to (a) review all such records, correspondence, notices, documents, and other materials (including warning letters and letters of adverse findings) and (b) inspect the other Party's facilities for compliance with this Agreement, in particular to inspect and audit uniQure's standard procedures regarding the Manufacturing of Products. Any inspection shall not unreasonably disrupt the normal operations of the inspected Party and shall be announced with a notice period of at least[†] months prior to such audit.

3.10 Price and Reimbursement Approvals. Subject to Section 8.1(a) and (c) below, taking into account uniQure's unique experience and understanding of Gene Therapy generally and the Product specifically, both Parties agree that Chiesi and uniQure shall jointly consult and prepare the pricing strategy for the Price and Reimbursement Approvals of the Product in the Field in the Territory to be filed and obtained by Chiesi. For the avoidance of doubt and in accordance with Section 8.1(c) below, such consultation shall not establish or create any obligation of Chiesi to set a certain or fixed price for the Product.

ARTICLE IV
GOVERNANCE; DECISION MAKING

4.1 Joint Steering Committee.

(a) *Formation and Membership*. Within [†] days after the Effective Date, Chiesi and uniQure shall establish a joint steering committee (the "JSC") to manage the Collaboration. The JSC to be established under this Agreement shall be identical to the one to be established under the Co-Development and License Agreement. The JSC shall be comprised of [†] executives or senior employees of Chiesi and [†] executives or senior employees of uniQure with appropriate experience and level of decision-making authority. From time to time, in addition to the JCC described below, the Parties may

establish one or more subcommittees of the JSC to oversee particular projects or activities (e.g., activities under the Co-Development and License Agreement, financial reporting). Each such subcommittee shall be comprised of an equal number of representatives from each Party with appropriate experience and level of decision-making authority. Each subcommittee shall meet with a frequency to be agreed on by the Parties. Each Party may change any one or more of its representatives on the JSC or any subcommittee at any time upon written notice to the other Party.

(b) *Responsibilities*. The JSC shall be responsible for:

(i) providing overall direction of the Collaboration;

(ii) attempting to resolve disputes arising under the Collaboration Agreements; and

(iii) performing such other tasks and undertaking such other responsibilities as may be set forth in the Collaboration Agreements.

(c) *Meetings*.

(i) The JSC shall meet at least once each[†], by tele- or video-conference or in person, with the meetings in approximately [†]to be held in-person. The location of in-person JSC meetings shall alternate between the headquarters offices of each Party, with the first meeting to take place at uniQure's site in Amsterdam within [†]days after the Effective Date.

(ii) Each Party shall use reasonable efforts to cause its representatives to attend the meetings of the JSC and any subcommittees. In addition, each Party may, at its discretion, invite a reasonable number of non-voting employees or officers, and, with the consent of the other Party, consultants or scientific advisors, to attend meetings of the JSC or any subcommittee, or the relevant portion thereof; provided that, its representatives and any such other employees, officers, consultants or scientific advisors are bound by written obligations of confidentiality that are at least as stringent as those set forth in this Agreement. Each Party shall bear all travel and living expenses of its representatives and other employees, officers, consultants or scientific advisors incurred to attend the meetings of the JSC or any subcommittee.

(iii) Either Party may also request, by providing written notice to the other Party, that a special meeting of the JSC be convened for the purpose of resolving disputes in connection with, or for the purpose of reviewing or making a decision pertaining to, any material matter within the purview of the JSC, the examination or resolution of which cannot reasonably be postponed until the next scheduled JSC meeting. Such meeting shall be convened at such time as may be mutually agreed upon by the Parties, but in any event shall be held within [†] days after the date of such notice.

(d) *Administrative Matters*. The right to appoint the chairperson of the JSC shall alternate on an annual basis between Chiesi and uniQure, with [†] having

the right to appoint the chairperson for the first year of the Term. The Alliance Managers shall work with the chairperson to develop JSC meeting agendas. The chairperson shall be responsible for calling meetings of the JSC and for leading the meetings. A JSC member of the chairing Party shall serve as secretary of such meetings. The secretary shall promptly prepare and distribute to all members of the JSC draft minutes of the meeting for review and comment, including a list of any actions or decisions approved by the JSC, with the goal of distributing final approved minutes of each JSC meeting within [†] days after the meeting. Neither the chairperson nor the secretary shall have any greater authority than any other representative on the JSC and the Party appointing the chairperson and the secretary shall not have any greater authority than the other Party by virtue of its right to make such appointments. The chairperson shall include on the agenda any items proposed by either Party.

(e) *Decision Making*. Each Party, through its representatives, shall have one (1) vote on the JSC and each subcommittee. Both Parties must vote in the affirmative to allow the JSC or a subcommittee to take any action that requires the approval of the JSC or the subcommittee. Decision on any matter may be taken at a meeting, by teleconference, videoconference or by written agreement. If a subcommittee is unable to resolve any dispute, or to unanimously agree on any matter, within its responsibilities, such dispute or matter shall be referred to the JSC for resolution. Either Party may convene a special meeting of the JSC in accordance with Section 4.1(c)(iii) for the purpose of resolving any dispute within the JSC's jurisdiction that represents a material issue the resolution of which cannot reasonably await until the next scheduled meeting of the JSC.

(f) *Dispute Resolution by Executive Officers*.

(i) If the JSC is unable to resolve any dispute within the responsibilities of the JSC specified in Section 4.1(b) within [†] days after a Party provides notice to the other Party of the existence of such dispute, such dispute or other matter shall be referred to the Executive Officers for resolution. If a dispute is referred to the Executive Officers for resolution pursuant to the preceding sentence, the Executive Officers shall attempt in good faith to resolve such dispute within [†] days. In resolving any disputes under this Section 4.1(f), each Party shall act in good faith, subject to the terms and conditions of the Collaboration Agreements, and in a commercially reasonable manner without favoring other products being developed or commercialized by or on behalf of such Party or its Affiliates outside of the Collaboration.

(ii) If the Executive Officers are unable to reach a consensus in accordance with paragraph (i) above, (A) [†] shall have final decision-making authority with respect to all matters related to [†]in relation to the Product, with reasonable input from [†] taking into account Territory-specific matters, (B) [†] shall have final decision-making authority with respect to all matters related to [†]of the Product in the Territory, with reasonable input from [†] taking into account[†], (C) subject to Sections 3.1 and 3.2, both Parties agree that on regulatory matters with respect to the Product they will jointly work towards a regulatory strategy for the Product in the countries of the Territory which are not EU Member States, and (D) any matter not falling within any of the foregoing categories (A) to (C) shall be decided by binding arbitration pursuant to Section 11.9 below.

4.2 Joint Commercialization Committee.

(a) *Formation and Membership*. Within [†] days after the Effective Date, Chiesi and uniQure shall establish, as a subcommittee of the JSC, a joint commercialization committee (the "JCC") to manage the overall relationship between the Parties under this Agreement. The JCC shall be comprised of [†] executives or senior employees of Chiesi and [†] executives or senior employees of uniQure with appropriate experience and level of decision-making authority. From time to time, the Parties may establish one or more subcommittees of the JCC to oversee particular projects or activities (e.g., regulatory, supply, forecast, global brand integration). Each such subcommittee shall be comprised of an equal number of representatives from each Party with appropriate experience and level of decision-making authority. Each subcommittee shall meet with a frequency to be agreed on by the Parties. Each Party may change any one or more of its representatives on the JCC or any subcommittee at any time upon written notice to the other Party.

(b) *Responsibilities*. The JCC shall be responsible for:

(i) periodically reviewing the Regulatory Plan and suggesting or approving such updates or amendments to the Regulatory Plan as the JCC deems appropriate, including all budgets relating to activities to be conducted hereunder and amendments thereto;

(ii) ensuring consistency and coordination, to the maximum possible extent, between Commercialization activities to be conducted by uniQure in the Field outside the Territory and by Chiesi in the Field in the Territory;

(iii) providing overall strategic direction with respect to Commercialization and regulatory activities for the Product, including activities conducted under the Regulatory Plan;

(iv) overseeing Commercialization and regulatory activities for the Product;

(v) discussing and addressing any supply chain or other delivery issues that have arisen or might arise relating to the Product;

(vi) attempting to resolve disputes arising under this Agreement that are referred to the JCC by either Party or any subcommittee; and

(vii) performing such other tasks and undertaking such other responsibilities as may be set forth in this Agreement or as may be delegated to it by the JCC.

(c) *Meetings*.

(i) The JCC shall meet at least[†], by tele- or video-conference or in person, with the meetings in approximately [†]to be held in-person. The location of in-person JCC meetings shall alternate between the headquarters offices of each Party, with the first meeting to take place at uniQure's site in Amsterdam within [†] days after the Effective Date.

(ii) Each Party shall use reasonable efforts to cause its representatives to attend the meetings of the JCC and any subcommittees. In addition, each Party may, at its discretion, invite a reasonable number of non-voting employees or officers, and, with the consent of the other Party, consultants or scientific advisors, to attend meetings of the JCC or any subcommittee, or the relevant portion thereof; provided that, its representatives and any such other employees, officers, consultants or scientific advisors are bound by written obligations of confidentiality that are at least as stringent as those set forth in this Agreement. Each Party shall bear all travel and living expenses of its representatives and other employees, officers, consultants or scientific advisors incurred to attend the meetings of the JCC or any subcommittee.

(iii) Either Party may also request, by providing written notice to the other Party, that a special meeting of the JCC be convened for the purpose of resolving disputes in connection with, or for the purpose of reviewing or making a decision pertaining to, any material matter within the purview of the JCC, the examination or resolution of which cannot reasonably be postponed until the next scheduled JCC meeting. Such meeting shall be convened at such time as may be mutually agreed upon by the Parties, but in any event shall be held within [†] days after the date of such notice.

(d) *Administrative Matters*. uniQure shall have the right to appoint the chairperson of the JCC. The Alliance Managers shall work with the chairperson to develop JCC meeting agendas. The chairperson shall be responsible for calling meetings of the JCC and for leading the meetings. A uniQure JCC member shall serve as secretary of such meetings. The secretary shall promptly prepare and distribute to all members of the JCC draft minutes of the meeting for review and comment, including a list of any actions or decisions approved by the JCC, with the goal of distributing final approved minutes of each JCC meeting within [†] days after the meeting. Neither the chairperson nor the secretary shall have any greater authority than any other representative on the JCC and uniQure shall not have any greater authority than Chiesi by virtue of its right to make such appointments. The chairperson shall include on the agenda any items proposed by either Party.

(e) *Decision Making*. Each Party, through its representatives, shall have one (1) vote on the JCC and each subcommittee. Both Parties must vote in the affirmative to allow the JCC or a subcommittee to take any action that requires the approval of the JCC or the subcommittee. Decision on any matter may be taken at a meeting, by teleconference, videoconference or by written agreement. If a subcommittee is unable to resolve any dispute, or to unanimously agree on any matter, within its responsibilities, such dispute or matter shall be referred to the JCC for resolution. Either

Party may convene a special meeting of the JCC in accordance with Section 4.2(c)(iii) for the purpose of resolving any dispute within the JCC's jurisdiction that represents a material issue the resolution of which cannot reasonably await until the next scheduled meeting of the JCC.

(f) *Dispute Resolution*. If the JCC is unable to resolve any dispute within the responsibilities of the JCC specified in Section 4.2(b) within [†] days after a Party provides notice to the other Party of the existence of such dispute, then,(A) the respective representative(s) of each Party in the JCC may exercise the final decision-making authority of each Party pursuant to Section 4.1(f)(ii)(A) or, as the case may be, Section 4.1(f)(ii)(B) also at the JCC level or decide to refer such dispute to the JSC for decision, and (B) any matter not falling within any of the categories of Section 4.1(f)(ii)(A) or, as the case may be, Section 4.1(f)(ii)(B) shall be referred to the JSC for decision.

4.3 Alliance Managers. Each Party shall appoint an employee (or an employee of its Affiliate) to serve as an alliance manager ("Alliance Manager") with responsibility for overseeing that the Parties' activities are conducted in accordance with the Collaboration Agreements, and for being the primary point of contact between the Parties with respect to all such activities. The Alliance Managers to be appointed under this Agreement shall be identical to the ones to be appointed under the Co-Development and License Agreement. The Alliance Managers are responsible for driving the Collaboration progress and the resolution of issues between the Parties. The Alliance Managers may be members, but in any event may attend the meetings of the JSC, JCC or any other JSC subcommittee, and be responsible for communicating with and reporting to the JSC, JCC and any other JSC subcommittee on all relevant matters.

ARTICLE V
REPRESENTATIONS, WARRANTIES AND COVENANTS

5.1 Mutual Representations, Warranties and Covenants. Each Party hereby represents, warrants and covenants to the other Party, as of the Effective Date and, where expressly stated, at all times during the Term, as follows:

(a) Such Party: (i) is duly formed and in good standing under the laws of the jurisdiction of its formation, (ii) has the power and authority and the legal right to enter into this Agreement and perform its obligations hereunder, and (iii) has taken all necessary action on its part required to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder;

(b) Upon execution, this Agreement will have been duly executed and delivered on behalf of such Party and constitutes a legal, valid and binding obligation of such Party and is enforceable against it in accordance with its terms;

(c) The execution and delivery of this Agreement and the performance of such Party's obligations hereunder: (i) do not conflict with or violate any requirement of Applicable Laws or any provision of the articles of incorporation, bylaws or limited partnership agreement of such Party; and (ii) do not conflict with, violate, or breach, or constitute a default or require any further consent under, any contractual obligation or court or administrative order by which such Party is bound;

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(d) During the Term, to its knowledge, such Party will not, in the conduct of its activities under this Agreement, (i) employ or use any contractor or consultant that employs any individual or entity debarred by the FDA (or subject to a similar sanction of EMA), or (ii) employ any individual who or entity that is the subject of an FDA debarment investigation or proceeding (or similar proceeding of EMA);

(e) During the Term, such Party shall perform its activities pursuant to this Agreement in compliance in all material respects with Applicable Laws;

(f) During the Term, neither Party shall grant any right or license to any Third Party relating to any of the Intellectual Property Rights it Controls which would conflict with, or limit the scope of, any of the rights or licenses granted or to be granted to the other Party hereunder.

5.2 Additional Representations, Warranties and Covenants of uniQure. uniQure hereby represents, warrants and covenants as of the Effective Date, and, where expressly stated, at all times during the Term, that:

(a) During the Term, at the time the same are tendered to the carrier for delivery to Chiesi's customers, the Product sold to Chiesi pursuant to this Agreement (i) shall be Manufactured, stored, handled and released in compliance with all Applicable Laws, including GMPs; (ii) shall meet the applicable Specifications and (iii) shall not be adulterated or misbranded or otherwise defective within the meaning of any Applicable Laws;

(b) Schedule 1.63 attached hereto is a complete and correct list of all Patents that Cover the Product in the Territory and, subject to Section 9.1(b), are Controlled by uniQure as of the Effective Date;

(c) uniQure Controls all uniQure Intellectual Property and, subject to Section 9.1(b), has the full right, power and authority to grant to Chiesi the rights and licenses necessary to perform Chiesi's activities under this Agreement in the Territory;

(d) To uniQure's knowledge, the Commercialization of the Product in the Territory, as anticipated hereunder, does not infringe upon any Intellectual Property Rights of any Third Party;

(e) uniQure has not received any written allegation from a Third Party that any of the Patents issued on the Effective Date which is Controlled by UniQure and Covering the Product in the Territory is invalid or unenforceable and, to uniQure's knowledge, none of such Patents is infringed by any Third Party.

5.3 Additional Representations, Warranties and Covenants of Chiesi. Chiesi hereby represents, warrants and covenants as of the Effective Date, and, where expressly stated, at all times during the Term, that any and all Delivery Notification requirements set forth in Section 2.5(b) shall be fulfilled before any quantities of the Product are supplied to any of its customers.

5.4 No Other Representations or Warranties. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER PARTY MAKES ANY REPRESENTATION OR EXTENDS ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY THAT ANY PATENT RIGHTS ARE VALID OR ENFORCEABLE, AND EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, EACH PARTY DISCLAIMS ANY WARRANTIES WITH REGARDS TO: (A) THE SAFETY, USEFULNESS FOR ANY PURPOSE OR NON-INFRINGEMENT OF ANY PRODUCT; OR (B) THE VALIDITY, ENFORCEABILITY OR NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHTS IT PROVIDES OR LICENSES TO THE OTHER PARTY UNDER THIS AGREEMENT.

5.5 No Reliance by Third Parties. The representations and warranties of a Party set forth in this Article 5 are intended for the sole and exclusive benefit of the other Party hereto, and may not be relied upon by any Third Party.

ARTICLE VI
INDEMNIFICATION; INSURANCE

6.1 Indemnification by Chiesi. Chiesi shall indemnify, defend and hold harmless uniQure and its Affiliates, and its and their respective directors, officers, employees and agents, from and against any and all liabilities, damages, losses, costs and expenses, including the reasonable fees of attorneys and other professional Third Parties (collectively, "Losses"), arising out of or resulting from any and all Third Party suits, claims, actions, proceedings or demands ("Claims") to the extent based upon:

(i) any breach of any representation, warranty or covenant made by, or any material obligation of, Chiesi under this Agreement;

(ii) the gross negligence, recklessness or willful misconduct of Chiesi or its Affiliates and its or their respective directors, officers, employees and agents;

(iii) any theory of product liability (including without limitation tort, warranty, or strict liability) that is applicable in the Territory with respect to the death, personal injury, or illness of any Person in the Territory, and arising directly from Chiesi's or its Affiliates' or Sub-distributors' Commercialization of the Product in the Territory;

provided that Chiesi shall not be obligated pursuant to this Section 6.1 if and to the extent uniQure is required to indemnify Chiesi under Section 6.2 below.

6.2 Indemnification by uniQure. uniQure shall indemnify, defend and hold harmless Chiesi and its Affiliates, and its and their respective directors, officers, employees and agents, from and against any and all Losses, arising out of or resulting from any and all Claims to the extent based upon:

(i) any breach of any representation, warranty or covenant made by, or any material obligation of, uniQure under this Agreement;

(ii) the gross negligence, recklessness or willful misconduct of uniQure or its Affiliates and its or their respective directors, officers, employees and agents;

(iii) any theory of product liability (including without limitation tort, warranty, or strict liability) that is applicable in the Territory with respect to the death, personal injury, or illness of any Person in the Territory, and arising directly from uniQure's or its Affiliates' development, design, Manufacture, storage, release and handling of the Product;

(iv) Claims that the (i) Commercialization of the Product; or (ii) exercise of any rights or licenses granted to Chiesi and its Affiliates in accordance with this Agreement; violates or infringes upon the Intellectual Property Rights of any Third Party;

provided that uniQure shall not be obligated pursuant to this Section 6.2 if and to the extent Chiesi is required to indemnify uniQure under Section 6.1 above.

6.3 Procedure.

(i) A Party entitled to indemnification under this Article VI (an "Indemnified Party") shall give prompt written notification to the Party from whom indemnification is sought (the "Indemnifying Party") of the commencement of any Claim for which indemnification may be sought or, if earlier, upon the assertion of any such Claim by a Third Party (it being understood and agreed, however, that the failure by an Indemnified Party to give notice of a Claim as provided in this Section 6.3(i) shall not relieve the Indemnifying Party of its indemnification obligation under this Agreement except and only to the extent that such Indemnifying Party is actually damaged as a result of such failure to give notice).

(ii) Within [†] days after delivery of such notification, the Indemnifying Party may, upon written notice thereof to the Indemnified Party, assume control of the defense of such Claim with counsel reasonably satisfactory to the Indemnified Party.

(iii) If the Indemnifying Party does not assume control of such defense, the Indemnified Party shall control such defense and, without limiting the Indemnifying Party's indemnification obligations, the Indemnifying Party shall reimburse the Indemnified Party for all reasonable costs and expenses, including reasonable attorney's fees, incurred by the Indemnified Party in defending itself, within [†] days after receipt of any invoice therefor from the Indemnified Party, such invoice to be issued no more often than quarterly.

(iv) The Party not controlling such defense may participate therein at its own expense; provided that, if the Indemnifying Party assumes control of such defense and the Indemnified Party in good faith concludes, based on advice from counsel, that the Indemnifying Party and the Indemnified Party have conflicting interests with respect to such Claim, the Indemnifying Party shall be responsible for the reasonable fees and expenses of counsel to the Indemnified Party in connection with its participation in the defense action.

(v) The Party controlling such defense shall keep the other Party advised of the status of such Claim and the defense thereof and shall consider recommendations made by the other Party with respect thereto.

(vi) The Indemnified Party shall not agree to any settlement of any Claim without the prior written consent of the Indemnifying Party, which shall not be unreasonably withheld, delayed or conditioned. The Indemnifying Party shall not, without the prior written consent of the Indemnified Party, agree to any settlement of such Claim, or consent to any judgment in respect thereof, that does not include a complete and unconditional release of the Indemnified Party from all liability with respect thereto, that imposes any liability or obligation on the Indemnified Party or that acknowledges fault by the Indemnified Party.

6.4 Limitation of Liability. EXCEPT WITH RESPECT TO ANY BREACH BY A PARTY OF ITS OBLIGATIONS UNDER ARTICLE X, EXCEPT AS PROVIDED FOR IN SECTION 2.6, EXCEPT FOR ANY DAMAGES ARISING FROM A PARTY'S WILLFUL MISCONDUCT AND EXCEPT TO THE EXTENT A PARTY MAY BE REQUIRED TO INDEMNIFY THE OTHER PARTY UNDER THIS ARTICLE VI WITH RESPECT TO THIRD PARTY CLAIMS, NEITHER PARTY SHALL BE LIABLE FOR ANY (AND EACH PARTY HEREBY DISCLAIMS ALL) SPECIAL, EXEMPLARY, CONSEQUENTIAL, PUNITIVE OR OTHER INDIRECT DAMAGES, INCLUDING LOST REVENUE AND LOST PROFITS, WHETHER BASED UPON WARRANTY, CONTRACT, TORT, STRICT LIABILITY OR OTHER LEGAL THEORY. EXCEPT WITH RESPECT TO ANY BREACH BY UNIQURE OF ITS OBLIGATIONS UNDER ARTICLE X, EXCEPT AS PROVIDED FOR IN SECTION 2.6, EXCEPT FOR ANY DAMAGES ARISING FROM UNIQURE'S WILLFUL MISCONDUCT AND EXCEPT TO THE EXTENT UNIQURE MAY BE REQUIRED TO INDEMNIFY CHIESI UNDER THIS ARTICLE VI WITH RESPECT TO THIRD PARTY CLAIMS, THE TOTAL LIABILITY OF UNIQURE, ITS AFFILIATES, AND THEIR RESPECTIVE OFFICERS, EMPLOYEES, AND AGENTS ARISING OUT OF OR IN RELATION TO THIS AGREEMENT, WHETHER BASED UPON WARRANTY, CONTRACT, TORT, STRICT LIABILITY OR OTHER LEGAL THEORY, SHALL FURTHER BE LIMITED TO AN AMOUNT OF EUR [†] (IN WORDS: [†] EURO) (REFLECTING THE AMOUNT PAYABLE UNDER UNIQURE'S INSURANCE PURSUANT TO SECTION 6.5) FOR THE CORRESPONDING DAMAGE EVENT. CHIESI SHALL REASONABLY COOPERATE WITH UNIQURE IN OBTAINING SUCH INSURANCE, AT UNIQURE'S COST.

6.5 Insurance. Each Party shall procure and maintain at its cost insurance, including product liability insurance, adequate to cover its obligations hereunder and which are consistent with normal business practices of comparable companies with respect to similar obligations and liabilities, at all times during the Term. In addition, uniQure shall further procure and maintain, at uniQure's cost, insurance adequate to cover its obligations under the in-license agreement with Xenon Pharmaceuticals Inc. dated 18 June 2001 and Chiesi shall reasonably cooperate with uniQure in obtaining such insurance. It is understood that such insurance shall not be construed to create any limit of either Party's obligations or liabilities with respect to its indemnification obligations hereunder. Each Party shall provide the other, upon request, with evidence of such insurance.

ARTICLE VII
INTELLECTUAL PROPERTY

7.1 Ownership. uniQure shall own or otherwise Control all right, title and interest in and to any uniQure Intellectual Property Rights.

7.2 Enforcement. uniQure shall have the exclusive right and the obligation, to institute infringement actions against any Third Parties (other than Sub-distributors) based on any Patents and other Intellectual Property Rights Covering the Product in the Territory. Chiesi shall execute all necessary and proper documents and take such actions as shall be appropriate to allow uniQure to institute and prosecute such infringement actions and shall otherwise cooperate, at uniQure's expense, in the institution and prosecution of such actions. Upon reasonable request of Chiesi, uniQure (i) shall provide to Chiesi all reasonable information in connection with such infringement actions; (ii) shall allow a qualified representative of Chiesi to attend as an observer at relevant negotiations and hearings, if and to the extent such attendance is both legally permitted and reasonably acceptable for uniQure and (iii) shall consider any measures suggested by Chiesi in connection with such infringement actions, it being understood that uniQure, without any obligation to state reasons for its decision, shall not be obliged to accept, fulfill or maintain such measures.

7.3 Right to Commercialize.

(a) During the Term and subject to the terms of this Agreement, in particular Section 9.1(b), uniQure hereby grants to Chiesi and its Affiliates a royalty-free right and license, with the right to grant sublicenses only to Sub-distributors, in the Territory to uniQure Intellectual Property Rights that are required to Commercialize the Product in the Territory under and in accordance with the terms of this Agreement. Such right and license shall be exclusive except in cases where, based on agreements between uniQure and Third Parties existing on the Effective Date, uniQure is not capable of granting exclusive but only non-exclusive licenses (e.g. because uniQure itself has only obtained non-exclusive rights and licenses from Third Party licensors).

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(b) Chiesi shall not have the right to carry out any research or development with respect to the Product, or, subject to Sections 2.6, 9.3(b) and 9.3(c), to Manufacture the Product, or have the Product Manufactured by an Affiliate or Third Party.

7.4 Compliance with Third Party Agreement.

(a) The grants by uniQure under uniQure Intellectual Property Rights set forth in Section 7.3(a) include the sublicense of certain uniQure Intellectual Property Rights that are not owned by uniQure. Chiesi's rights and licenses under, or with respect to, uniQure Intellectual Property Rights, including any Patent prosecution or enforcement undertaken by the Parties pursuant to Section 7.2, are limited to the rights granted by Third Party licensors to uniQure under the respective in-license agreements between such Third Party licensors and uniQure ("Existing Third Party Licenses") and are subject to all applicable restrictions, limitations and obligations imposed on uniQure or its sub-licensees in such Existing Third Party Licenses, a copy of which agreements is attached hereto as Schedule 7.4. Chiesi shall comply, and cause its Affiliates and Sub-distributors to comply, with all such restrictions, limitations and obligations *mutatis mutandis*. To the extent there is a conflict between the terms of any Existing Third Party License and the rights granted to Chiesi hereunder, the terms of such Existing Third Party License shall control solely with respect to the Patents and know-how owned or controlled by the applicable Third Party licensor. Notwithstanding anything to the contrary in this Agreement, either Party may not exercise any of its rights under this Agreement (including any right to any cure period (including under Section 9.2(b)) or to delay performance of an obligation (including under Section 11.6)) in any manner that would result in any licensor having a right to terminate an Existing Third Party License, or that would cause the other Party to be in breach of any of its obligations under any Existing Third Party License.

(b) During the Term, uniQure shall comply with the Existing Third Party Licenses in effect which are then applicable to the activities under this Agreement with respect to the Product (and in particular shall not commit any breach that would entitle the Third Party licensor to terminate such an Existing Third Party License) and shall not terminate any such Existing Third Party License without Chiesi's prior written consent. In addition, during the Term, uniQure shall promptly notify Chiesi of any written notice of breach or termination received by uniQure with respect to any such Existing Third Party License and, to the extent that uniQure does not cure such breach at least [†] Business Days before the date on which the relevant licensor could terminate such Existing Third Party License due to such breach by uniQure, Chiesi shall have the right (to the extent consistent with such Existing Third Party License) to cure any such breach on uniQure's behalf and in such a case, Chiesi shall have the right to deduct (i) any and all arm's length payments made on behalf of uniQure for the above purpose, from the next due payments to be made hereunder plus (ii) interest on such payments calculated pursuant to Section 2.1(f) above.

(c) The license granted by uniQure in Section 7.3(a) with respect to the Patents licensed under the Existing Third Party Licenses are subject to rights reserved by the licensors and the US government as set forth in the Existing Third Party Licenses.

7.5 Additional Rights Acquired after Effective Date.

(a) During the Term, if either Party identifies the need for, or is otherwise offered, a license, covenant not to sue or similar rights to any Third Party Intellectual Property Rights that such Party in good faith believes is necessary or useful for the Commercialization of the Product in the Field in the Territory ("Additional Rights"), then such Party shall promptly notify the other Party and, in any event, prior to commencing negotiation or entering into an agreement with respect to such Additional Rights, and the Parties' rights to conduct such negotiations shall be subject to the remaining provisions of this Section 7.5. The Parties shall thereafter conduct good faith discussions regarding whether such Additional Rights are necessary or useful for the Commercialization of the Product in the Field in the Territory or whether they otherwise agree that such Additional Rights should be acquired.

(b) uniQure shall have the first right (but not the obligation) to license or otherwise acquire rights to any Additional Rights. If uniQure provides written notice to Chiesi that uniQure declines to exercise such first right, then Chiesi shall have the right (but not the obligation) to pursue acquiring rights to any given Additional Rights. The Party pursuing any given Additional Rights (the "Controlling Party") shall keep the other Party (the "Non-Controlling Party") reasonably informed regarding the status thereof and shall use Commercially Reasonable Efforts to obtain from the applicable Third Party licensor the right to sublicense such Additional Rights under the licenses granted to the Non-Controlling Party hereunder.

(c) If the Controlling Party acquires rights to any Additional Rights and has the right to grant a sublicense under such Additional Rights to the Non-Controlling Party, and the Non-Controlling Party wishes to include such Additional Rights in the licenses granted to the Non-Controlling Party hereunder, the Non-Controlling Party shall notify the Controlling Party of its desire to do so and the Controlling Party shall provide the Non-Controlling Party a summary of all material restrictions on the scope of the licenses granted under, and all material payment obligations that would be owed by the Non-Controlling Party with respect to, any Third Party agreement applicable to such Additional Rights. The Non-Controlling Party may, upon written notice to the Controlling Party and subject to Section 7.5(d), Section 7.5(e) and Section 7.5(f), obtain a sublicense under such Additional Rights and include such Additional Rights under the licenses granted to the Non-Controlling Party hereunder.

(d) Following such notice from the Non-Controlling Party that it desires to include any given Additional Rights under the license granted to the Non-Controlling Party hereunder, (i) any such Additional Rights that do not carry financial or other obligations or restrictions shall be included automatically under the applicable license hereunder, and (ii) subject to Section 7.5(e) below, any such Additional Rights that carry financial or other obligations or restrictions[†].

(e) If the Parties are unable, after [†] Business Days, to agree as to whether any given Additional Rights are in fact necessary or useful for the Commercialization of the Product in the Field in the Territory or if the Parties are unable to agree to the allocation of the costs (as specified above), then the Parties shall jointly

engage an expert panel consisting of patent attorney(s) or expert(s) in the development, manufacturing or commercialization of products comparable to the Product in question and other CMC matters, as applicable, not regularly employed by either Party to resolve such dispute. The decision of such expert panel shall be binding on the Parties as to such dispute.

(f) Nothing in this Section 7.5 shall restrict either Party, at such Party's sole cost and expense, from licensing or otherwise acquiring any additional rights that are not necessary or useful for the Commercialization of the Product in the Field in the Territory.

ARTICLE VIII
COMMERCIALIZATION

8.1 Commercialization.

(a) Chiesi shall have the sole right and responsibility, at its expense, to Commercialize the Product in the Field in the Territory, including for booking all sales of the Product throughout the Territory. At all times during the Term Chiesi shall in no event use less than Commercially Reasonable Efforts to Commercialize the Product, including compliance with marketing plan and budget, allocation of Minimum FTEs and setting of a Target Price (as defined in Schedule 8.1(a)) in[†], as further described in Schedule 8.1(a). Notwithstanding the foregoing, Chiesi shall at least use Commercially Reasonable Efforts to achieve the First Commercial Sale of the Product in the Territory in [†], provided that uniQure shall ensure availability of sufficient quantities of Product for supply to Chiesi's customers for such purpose, prior to the First Commercial Sale. In the event Chiesi fails to meet (i) the allocation of Minimum FTEs or (ii) the timelines for submission of each relevant dossier for obtaining the Price and Reimbursement Approval for the Product, as further described in Schedule 8.1(a), and such failure is not caused by a Force Majeure Event or uniQure's Failure to Supply, and Chiesi fails to cure such failure within [†] months after receiving written notice of such failure, uniQure shall have the right to terminate this Agreement in its entirety in the event of a failure as described in sub-paragraph (i) above or, at the sole discretion of uniQure, with respect to the particular countries to which such failure relates in the event of a failure as described in sub-paragraph (ii) above.

(b) In order to prevent a substantial delay in achieving the First Commercial Sale of the Product in the Territory, certain commercial and development activities have been committed to by uniQure prior to the Effective Date (the "Approved Activities") attached in Schedule 8.1(b). Such Approved Activities shall be reimbursed by Chiesi at uniQure's actual cost.

(c) Chiesi shall have the sole authority to determine the resale price of the Product in the Field in the Territory.

8.2 Exclusivity.

(a) During the Term, Chiesi shall not actively market, advertise for, canvas for or seek orders for the Product outside the Field or Territory or establish any branch, subsidiary, or depot for the supply of the Product outside the Field or Territory. The Parties shall inform each other promptly in case of any Commercialization activities of Third Parties in the Field in the Territory, or of any Commercialization activities of Chiesi or any of its Affiliates outside the Field or Territory to agree – within the limits of applicable competition laws – on any appropriate measures to be taken.

(b) During the Term, uniQure shall not offer for sale, sell, license or otherwise Commercialize the Product in the Territory other than in compliance with the terms of this Agreement. uniQure shall be free, however, at any time during the Term, to Commercialize, directly or indirectly, the Product outside the Territory.

(c) To the fullest extent consistent with any Applicable Laws, each Party shall, and shall procure that any of its Affiliates will, not directly or indirectly, itself or through or with or on behalf of any Third Party, develop, Manufacture or Commercialize in the Territory any Gene Therapy based product characterized to treat lipoprotein lipase deficiency, other than the Product in accordance with this Agreement. From time to time during the Term, the Parties may negotiate exceptions for Persons which will become Affiliates of a Party due to an acquisition of or by a Party or its Affiliates.

ARTICLE IX
TERM AND TERMINATION

9.1 Term.

(a) *General*. This Agreement shall become effective as of the Effective Date and shall remain in force, on a country-by-country basis, for the longer of (i) twelve (12) years from the First Commercial Sale of the Product in the relevant country of the Territory; (ii) expiry of any regulatory exclusivity granted by any Marketing Authorization or any other Regulatory Approval in the relevant country of the Territory; or (iii) expiry of the last Valid Claim Covering the Product in the relevant country of the Territory. Unless terminated by a Party with [†] months written notice to the other Party to the end of the above initial or any subsequent term, this Agreement shall automatically be renewed for successive [†] year terms (the initial and each subsequent term, the "Term").

(b) *Condition Precedent*. This Agreement, except for the obligation to submit the first Firm Order in accordance with Section 2.4(b), and any ancillary agreement concluded between the Parties in connection herewith, including the Quality Agreement and the SDEA, and the Co-Development and License Agreement and the agreement regarding the equity investment of Chiesi in uniQure concluded on the date hereof, shall become effective once the Parties have received consent from or, as the case may be, entered into separate agreements with, the respective Third Party licensors to the subcontracting of the rights and licenses licensed by uniQure as licensee under the

Existing Third Party Licenses listed in Schedule 9.1 to Chiesi. uniQure and, to the extent applicable, Chiesi, shall use Commercially Reasonable Efforts to obtain such consent or, as the case may be, enter into such agreements, on or prior to [†]. If, despite the Parties' Commercially Reasonable Efforts, such consent has not been obtained from or, as the case may be, such agreements have not been entered into with, all such Third Party licensors by the end of [†], this Agreement and all other agreements that are subject to the condition precedent pursuant to sentence 1 shall be deemed null and void as of the Effective Date and the first Firm Order submitted by Chiesi in accordance with Section 2.4(b) shall be deemed withdrawn, unless, prior to the end of such period, following a corresponding request of either Party, the Parties mutually agree in writing on an extension of such period. The Parties agree that (i) costs and expenses incurred in connection with the preparation and execution of this Agreement as well as obtaining of the aforementioned consent or, as the case may be, enter into the aforementioned agreements,[†].

9.2 Termination. Without prejudice to any other termination rights set forth herein, the Parties shall have the following termination rights:

(a) *Mutual Agreement*. The Parties may terminate this Agreement at any time during the Term upon mutual agreement in writing.

(b) *Material Breach*. Either Party may immediately terminate this Agreement in writing if the other Party materially breaches this Agreement and fails to cure such breach within [†] days after receiving written notice of the breach.

(c) *Insolvency*. Either Party may immediately terminate this Agreement in writing if the other Party ceases to carry on business, is unable to pay its debts when they fall due, is declared bankrupt, or an order is made or a resolution passed for the winding up of that other Party or the appointment of an administrator, receiver, liquidator, or manager of that other Party.

(d) *IP Challenge*. Either Party may immediately terminate this Agreement in writing if the other Party or any of its Affiliates or, as the case may be, Sub-distributors challenges the validity of any trademark as set forth in Section 2.2(a) or if Chiesi or any of its Affiliates or Sub-distributors challenges the validity, enforceability, patentability or scope of any Valid Claim included in any Patents.

9.3 Effects of Expiration / Termination.

(a) Upon termination of this Agreement by uniQure pursuant to Sections 8.1(a), 9.2(b), 9.2(c) or 9.2(d):

(i) Chiesi shall purchase from uniQure any quantity of Product which has been included in a Confirmed Firm Order through the effective date of termination, unless otherwise elected by UniQure pursuant to Section 9.3(a)(ii) below;

(ii) (A) all rights, privileges and licenses granted hereunder to Chiesi shall remain in full force and effect until all quantities of Product ordered and

delivered hereunder, at the election of uniQure, (y) have been sold by Chiesi, or (z) have been redeemed by uniQure from Chiesi at the Purchase Price originally charged to Chiesi except for such portion of Product as is needed to fill orders then held by Chiesi; and (B) Chiesi shall thereafter not make any use whatsoever of any such rights, privileges and licenses and transfer to uniQure any Marketing Authorization then held by Chiesi or its Sub-distributor, unless required by Applicable Laws or expressly set forth otherwise in this Agreement;

(iii) save as required under the Quality Agreement or the SDEA, at any time upon written request of the disclosing Party, unless expressly set forth otherwise in this Agreement, the receiving Party shall cease use of and return or at the disclosing Party's request destroy all Confidential Information of the disclosing Party and all copies thereof except for a single copy of such Confidential Information that may be retained confidentially for legal purposes only;

(iv) all rights, privileges and licenses granted hereunder to uniQure regarding any alternative Trademark identified by Chiesi and any other trademarks, logos or service marks of Chiesi shall become fully paid-up, irrevocable and perpetual.

(b) Upon termination of this Agreement by Chiesi pursuant to Sections 9.2(b), 9.2(c) or 9.2(d):

(i) all rights, privileges and licenses granted hereunder to Chiesi regarding the uniQure Intellectual Property Rights, including the rights granted under Section 2.2(a), shall become fully paid-up, irrevocable and perpetual;

(ii) all rights, privileges and licenses granted hereunder to uniQure shall terminate and uniQure shall not make any use whatsoever of any alternative Trademark identified by Chiesi and any other trademarks, logos or service marks of Chiesi, unless required by Applicable Laws or expressly set forth otherwise in this Agreement;

(iii) uniQure shall furnish Chiesi with reasonable cooperation, and continue to supply Chiesi's requirements of Product for the [†] month period following notice of termination in accordance with the terms and conditions of this Agreement, provided however, that the Purchase Price for the individual Product ordered after the effective date of termination shall be [†] of such particular Product. No later than [†] months prior to the expiration of such [†] month period the Parties shall enter into good faith negotiations regarding the supply of Chiesi's requirements of Product after expiration of such [†] month period, taking into account a fair adjustment of the transfer price pursuant to Section 2.3(b) for the Product to be supplied to Chiesi after such expiration;

(iv) save as required under the Quality Agreement or the SDEA, at any time upon written request of the disclosing Party, unless expressly set forth otherwise in this Agreement, the receiving Party shall cease use of and return or at the disclosing Party's request destroy all Confidential Information of the disclosing Party and all copies thereof except for a single copy of such Confidential Information that may be retained confidentially for legal purposes only.

(c) Upon expiration of the Term with respect to this Agreement by a Party exercising its termination right pursuant to Section 9.1(a) or mutual termination pursuant to Section 9.2(a) (unless otherwise agreed between the Parties in such mutual termination agreement):

(i) all rights, privileges and licenses granted hereunder to Chiesi shall become fully paid-up, irrevocable and perpetual;

(ii) all rights, privileges and licenses granted hereunder to uniQure shall become fully paid-up, irrevocable and perpetual;

(iii) Chiesi shall purchase from uniQure any quantity of Product which has been included in a Confirmed Firm Order through the effective date of expiration;

(iv) save as required under the Quality Agreement or the SDEA, at any time upon written request of the disclosing Party, unless expressly set forth otherwise in this Agreement, the receiving Party shall cease use of and return or at the disclosing Party's request destroy all Confidential Information of the disclosing Party and all copies thereof except for a single copy of such Confidential Information that may be retained confidentially for legal purposes only.

Upon expiration of the Term with respect to this Agreement by uniQure exercising its termination right pursuant to Section 9.1(a), uniQure shall continue to supply Chiesi's requirements of Product for the [†] month period following notice of termination in accordance with the terms and conditions of this Agreement, provided however, that the Purchase Price for the individual Product ordered after the effective date of termination shall be[†] of such particular Product. No later than [†] months prior to the expiration of such [†] month period the Parties shall enter into good faith negotiations regarding the supply of Chiesi's requirements of Product after expiration of such [†] month period, taking into account a fair adjustment of the transfer price pursuant to Section 2.3(b) for the Product to be supplied to Chiesi after such expiration.

(d) *Accrued Rights; Surviving Provisions*.

(i) Notwithstanding the giving of any notice of termination pursuant to this Article 9, each Party shall continue to fulfill such Party's obligations under this Agreement at all times until the effective date of any such termination.

(ii) Termination or expiration of this Agreement for any reason shall be without prejudice to any rights which shall have accrued to the benefit of either Party prior to such termination or expiration.

(iii) Without prejudice to Section 11.7, to the extent legally permitted, any compensation claims by Chiesi resulting from a direct or analogous

application of Article 17 of Council Directive 86/653/EEC, as amended, as transposed into the national laws of the EU Member States for undertaking the Commercialization of the Product in the Territory are expressly excluded and hereby expressly waived by Chiesi.

(iv) All those provisions which by their scope and nature extend beyond the Term, including Article I, Section 2.1(d) to (h), Article VI, Section 7.1, Section 9.3, Sections 10.1, 10.2 and 10.6, and Article XI, shall survive any expiration or termination of this Agreement, and remain in full force and effect.

ARTICLE X
CONFIDENTIALITY

10.1 Confidential Information. All Confidential Information disclosed by a Party or any of its Affiliates to the other Party or any of its Affiliates before or during the Term shall not be used by the receiving Party or any of its Affiliates except in connection with the activities contemplated by this Agreement, shall be maintained in confidence by the receiving Party and its Affiliates, and shall not otherwise be disclosed by the receiving Party or its Affiliates to any Third Party (except as set forth in the remainder of this Article X), without the prior written consent of the disclosing Party, except to the extent that the Confidential Information:

(a) was known or used by the receiving Party or any of its Affiliates prior to its date of disclosure by the disclosing Party;

(b) either before or after the date of the disclosure to the receiving Party hereunder or under the Confidentiality Agreement is lawfully disclosed to the receiving Party or any of its Affiliates by a Third Party rightfully in possession of and with the right to disclose such Confidential Information other than under an obligation of confidentiality;

(c) either before or after the date of the disclosure to the receiving Party hereunder or under the Confidentiality Agreement becomes generally known to the public through no fault or omission on the part of the receiving Party or its Affiliates;

(d) is independently developed by or for the receiving Party or any of its Affiliates without reference to or reliance upon any of the other Party's Confidential Information; or

(e) is required to be disclosed by the receiving Party or its Affiliates to comply with Applicable Laws, which may include the rules of Euronext, of the US Securities and Exchange Commission, or of any other stock exchange, or to defend or prosecute litigation or arbitration or to comply with legal process; provided that, the receiving Party provides prior written notice of such disclosure to the disclosing Party (to the extent feasible) and only discloses Confidential Information of the other Party to the extent necessary for such legal compliance or litigation purpose; and provided, further, that (i) the receiving Party shall use, or shall cause its Affiliates, as the case may be, to use, reasonable efforts to obtain confidential treatment, or the equivalent, from Euronext,

the US Securities and Exchange Commission, or other securities trading institution of any financial information or other information of a competitive or confidential nature, and shall include in such confidentiality request such provisions of this Agreement as may be reasonably requested by the disclosing Party, and (ii) such information shall otherwise remain Confidential Information (subject to the exceptions in this Section 10.1).

Notwithstanding the foregoing, paragraphs (a), (b) and (d) shall not alter the requirement to keep the terms and conditions of this Agreement confidential, as set forth herein, subject to the remainder of this Article X.

10.2 Employee, Director, Consultant and Advisor Obligations. Chiesi and uniQure each agrees that it and its Affiliates shall provide Confidential Information received from the other Party only to the receiving Party's employees, directors, consultants, agents and advisors, and to the employees, directors, consultants, agents and advisors of the receiving Party's Affiliates, who have a need to know such Confidential Information to assist the receiving Party in fulfilling its obligations under this Agreement and who are bound by obligations of confidentiality and non-use that are at least as restrictive as those set forth in this Agreement. Each Party shall remain responsible for any failure by any of its or its Affiliates' employees, directors, consultants, agents and advisors to treat such Confidential Information as required under this Article X.

10.3 Publicity.

(a) Following execution of this Agreement, the Parties shall jointly or separately issue a press release, in a text to be agreed upon between the Parties in advance, announcing the execution of this Agreement and the Co-Development and License Agreement.

(b) Each Party shall only issue press releases (other than the press release pursuant to paragraph (a) above) or make other public disclosures regarding this Agreement or the Parties' activities under this Agreement (each such press release or public disclosure, a "Subject Disclosure"):

(i) that have been approved in writing in advance by the other Party (such approval not to be unreasonably withheld, conditioned or delayed), including Subject Disclosures that describe one or more of the following:

(A) the filing for or receipt of Marketing Authorization with respect to the Product in the Territory;

(B) the receipt of Price and Reimbursement Approval for the Product in the Territory;

(C) the receipt of any regulatory exclusivity for the Product in the Territory;

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(D) the achievement of any commercial milestone pursuant to Section 2.1(c)(ii); or

(E) the first Party's presence or participation at scientific, financial or investor forums;

(ii) subject to Section 10.3(c), if advised by counsel to issue such Subject Disclosure in order to comply with Applicable Laws, which may include the disclosure rules of the US Securities and Exchange Commission or a similar regulatory agency in a country in the Territory or of Euronext or any other stock exchange of other securities trading institution; or

(iii) subject to Section 10.3(c), if the contents of such Subject Disclosure have previously been made public other than through a breach of this Article X by a Party.

(c) Unless not feasible under the circumstances because of the need to comply with Applicable Laws or stock exchange rules, the Party making a Subject Disclosure shall provide the other Party with a draft Subject Disclosure at least [†] Business Days prior to its intended publication for the other Party's review. Such other Party may provide the first Party with suggested modifications to the draft Subject Disclosure. The first Party shall consider in good faith the other Party's timely provided suggestions in issuing such Subject Disclosure.

(d) For clarity, nothing in this Agreement shall restrict (i) each Party from issuing press releases or making other public disclosures regarding such Party's development, manufacturing or commercialization activities with respect to any product other than the Product, or (ii) uniQure from issuing press releases or making other public disclosures regarding uniQure's development, manufacturing or commercialization activities with respect to the Product outside the Field or Territory.

10.4 Other Disclosures. Notwithstanding anything in this Agreement to the contrary, each Party shall have the right to disclose the other Party's Confidential Information (including the terms of this Agreement) (as applicable):

(a) to such Party's then-current or potential investors, lenders, acquirers, investment bankers, and other Third Parties in connection with financing, partnering (to the extent consistent with this Agreement) and acquisition activities, solely on a need-to-know basis and under obligations of confidentiality and non-use that are at least as restrictive as those set forth in this Article X;

(b) as required by the existing license agreements between uniQure and its Third Party licensors;

(c) to enforce Patents, Trademarks and other Intellectual Property Rights in accordance with Sections 2.2(a) and 7.2; or

(d) to such Party's then-current or potential collaborators, and Third Party contractors (including contract manufacturers and Sub-distributors) for purposes of engaging in the Manufacture or Commercialization of the Product as contemplated hereunder, solely on a need-to-know basis and under obligations of confidentiality and non-use that are at least as restrictive as those set forth in this Article X.

10.5 Publications.

(a) Notwithstanding Section 10.3 and Section 10.4, a Party (the "Publishing Party") which is, or whose Affiliates is, seeking to publish or publicly present scientific or technical data, results or other information with respect to the Product shall provide the other Party and the JCC with a copy of any proposed publication or presentation at least [†] days (or at least [†] days in the case of abstracts or oral public presentations) prior to submission for publication or presentation so as to provide such other Party with an opportunity to recommend any changes it reasonably believes are necessary to continue to maintain such other Party's Confidential Information in accordance with the requirements of this Agreement or to not jeopardize the patentability of any results or data.

(b) If the non-Publishing Party notifies the Publishing Party that such publication or presentation, in the non-Publishing Party's reasonable judgment, (i) discloses an invention for which the non-Publishing Party desires to seek patent protection, or (ii) contains any Confidential Information of the non-Publishing Party, or could be expected to have an adverse effect on the commercial value of any Confidential Information disclosed by the non-Publishing Party to the Publishing Party, the Publishing Party shall delete such Confidential Information from the proposed publication or presentation and shall further delay such publication or presentation for a period reasonably sufficient to permit the timely preparation and filing of a patent application(s) on any invention disclosed in such publication or presentation (but no more than [†] days from the date of the non-Publishing Party's notice thereof).

10.6 Term. All obligations of confidentiality imposed under this Article X shall expire [†] years following termination or expiration of this Agreement, except to the extent any Existing Third Party License between uniQure and its Third Party licensors extends such obligations; provided, however, that the receiving Party shall maintain the confidentiality of any of the other Party's trade secrets indefinitely until such trade secret is no longer a trade secret.

ARTICLE XI
MISCELLANEOUS

11.1 Entire Agreement, Amendments. This Agreement and the attachments hereto contain the entire understanding and agreement of the Parties with respect to the subject matter hereof and cancel and supersede any and all prior negotiations, correspondence, understandings and agreements between the Parties, whether oral or written, regarding such subject matter, including the Memorandum of Understanding dated 21 December 2012 and the Confidentiality Agreement, but expressly excluding the Co-Development and License Agreement. Except for the rights expressly conferred on

the JSC or JCC, this Agreement cannot be modified except by a written document bearing the signatures of both Parties. The same applies to any waiver of this written form requirement.

11.2 Assignments. Except as expressly provided herein, neither this Agreement nor any rights and obligations hereunder shall be assignable by a Party without the prior written consent of the other Party; provided, however, that a Party may assign this Agreement to any Affiliate or to any successor in interest by way of merger, acquisition or sale of all or substantially all of its assets to which this Agreement relates, provided that such successor agrees in writing to be bound by the terms of this Agreement as if it were the assigning Party. This Agreement shall be binding upon the successors and permitted assigns of the Parties. Any assignment not in accordance with this Section 11.2 shall be void.

11.3 Severability. Should any provision of this Agreement be or become invalid, ineffective or unenforceable as a whole or in part, the validity, effectiveness and enforceability of the remaining provisions shall not be affected thereby. Any such invalid, ineffective or unenforceable provision shall be deemed replaced by such valid, effective and enforceable provision as comes closest to the economic intent and the purpose of such invalid, ineffective or unenforceable provision. The aforesaid shall apply *mutatis mutandis* to any gap in this Agreement.

11.4 Notices. Other than as expressly specified in this Agreement, all notices and consents required to be provided hereunder shall be in writing and provided by hand, by recorded delivery mail (return receipt requested), by facsimile, or by recognized overnight courier service to the other Party at its address or facsimile number shown below or such other address or facsimile number notified by such other Party from time to time.

If to uniQure, addressed to:

uniQure Biopharma B.V.
P.O. Box 22506
1100 DA Amsterdam
The Netherlands
Attention: CEO
Fax: +31 20 566 9272

If to Chiesi, addressed to:

Chiesi Farmaceutici S.p.A.
Via Palermo, 26/A
43122 Parma
Italy
Attention: CEO
Copy to: Corporate Development, Head and General Counsel
Fax: +39 0521 774468

11.5 Waiver. Any failure of either Party to enforce any provision hereof shall not constitute a waiver by that Party of its right subsequently to enforce the same or any other provision hereof. The waiver of any provision of this Agreement shall only be effective if in writing signed by the Party claimed to have waived such provision.

11.6 Force Majeure. Neither Party shall lose any rights hereunder or be liable to the other Party for damages or losses on account of failure of performance by the defaulting Party if the failure is occasioned by war, civil insurrection, strike, fire, Act of God, earthquake, tempest, flood, epidemic, blackout, lockout, embargo, governmental acts or orders or restrictions, delays in delivery and non-supply by exclusive suppliers, where such delay or non-supply occurs as a result of such Force Majeure, or any other reason where failure to perform is beyond the reasonable control of such Party (each a "Force Majeure Event") and such failure to perform is not caused by the negligence, intentional conduct or misconduct of the non-performing Party and such Party has exerted all reasonable efforts to avoid or remedy such Force Majeure Event; provided, however, that in no event shall a Party be required to settle any labor dispute or disturbance.

11.7 Independence. The relationship between the Parties is that of independent contractors and neither Party shall have the power to bind or obligate the other Party in any manner. It is further understood and agreed that neither Party nor its Affiliates, nor its and their respective directors, officers and employees, shall be deemed an agent or employee of the other Party or its Affiliates.

11.8 Third Party Beneficiaries. All rights, benefits and remedies under this Agreement are solely intended for the benefit of uniQure and Chiesi. No Third Party shall have any rights whatsoever to (i) enforce any obligation contained in this Agreement; (ii) seek a benefit or remedy for any breach of this Agreement; or (iii) take any other action relating to this Agreement under any legal theory, including but not limited to, actions in contract, tort (including negligence, gross negligence and strict liability), or as a defense, setoff or counterclaim to any action or claim brought or made by the Parties.

11.9 Governing Law, Dispute Resolution. The validity and interpretation of this Agreement shall be governed by the laws of England without regard to its conflicts of laws principles and to the express exclusion of the United Nations Conventions on Contracts for the International Sale of Goods (CISG). Any dispute arising under, out of or relating to this Agreement shall be referred to and finally determined under the Rules of Arbitration of the International Chamber of Commerce by three (3) arbitrators appointed in accordance with the said Rules. The place of arbitration shall be London, United Kingdom. The language to be used in said proceedings shall be English.

11.10 Costs. Except as expressly provided in this Agreement or as separately agreed upon in writing between the Parties, each Party shall bear its own costs incurred in connection with the implementation of the obligations under this Agreement.

11.11 Construction. Each Party agrees that this Agreement shall be interpreted without regard to any presumption or rule requiring construction against the Party causing this Agreement to be drafted.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

11.12 Language. This Agreement shall be written and executed in, and all other communications under or in connection with this Agreement shall be in, the English language. Any translation into any other language shall not be an official version thereof, and in the event of any conflict in interpretation between the English version and such translation, the English version shall control.

11.13 Counterparts. This Agreement may be executed simultaneously in any number of counterparts, any one of which need not contain the signature of more than one Party but all such counterparts taken together shall constitute one and the same agreement. A pdf file of this Agreement contained in an email, including the signed signature pages hereto, will be deemed to be an original.

[*Signature Page Follows*]

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

IN WITNESS WHEREOF, the Parties have executed this Commercialization Agreement as of the Effective Date.

UNIQURE BIOPHARMA B.V.

By: /s/ Piers Morgan
Name: Mr. Piers Morgan
Title: Chief Financial Officer

UNIQURE BIOPHARMA B.V.

By: /s/ Hans Preusting
Name: Mr. Hans Preusting
Title: Business Development, Vice President

CHIESI FARMACEUTICI S.p.A.

By: /s/ Alberto Chiesi
Name: Mr. Alberto Chiesi
Title: President

CHIESI FARMACEUTICI S.p.A.

By: /s/ Ugo Di Francesco
Name: Mr. Ugo Di Francesco
Title: CEO

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SCHEDULE 1.9
Certificate of Analysis

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

CONTROLLED DOCUMENT - CONFIDENTIAL

uniQure

Certificate of Analysis

SMS number
Product Glybera® Drug Product (Final Product)
Part number C0114 rev.
Batch number
Production stage Drug product
Expiry date

Page 1 of 1

Test, Method	Specification	Result
Physical state, (QC-AIM-0006)	Liquid, practically free from visible particulates	
Colour, (QC-AIM-0006)	Colourless	
Clarity, (QC-AIM-0042)	4-16 NTU	
Sub-visible Particles, (Ph.Eur.2.9.19)	≤ 600 particles ≥ 25 µm ≤ 6000 particles ≥ 10 µm	
pH, (QC-AIM-0013)	6.9 - 7.3	
Osmolality, (QC-AIM-0017)	420 - 470 mOsmol/kg	
Extractable Volume, (QC-AIM-0037)	≥ 1.0 mL	
LPL cDNA confirmation by PCR, (QC-AIM-0019)	Single product band detected of mobility visually comparable to the reference standard band	
Capsid protein composition by microfluidic electrophoresis, (QC-AIM-0031)	Three major bands of visually comparable mobility and intensity to the corresponding reference standard bands	
Genome copies, (QC-AIM-0009)	2.3 x 10^12 – 3.7 x 10^12 gc/mL	
Total Protein, (QC-AIM-0022)	200 - 600 µg/mL	
Sucrose by refraction index, (QC-AIM-0008)	4.6 – 5.3 % (w/w)	
Infectious vector titre (SOP051)	5.5 x 10^10 – 3.8 x 10^11 ip/ml	
LPL expression, potency (QC-AIM-0030)	0.9 – 3.9 U/mL	
AAV protein purity by micro fluidic electrophoresis, (QC-AIM-0031)	≥ 95%	
Ratio full : infectious particles, (QC-AIM-0044) (genome copies : infectious vector titre)	≤ 51 gc/ip	
Monomeric particles, (QC-AIM-0028)	≥ 98%	
Protein impurities by microfluidic electrophoresis, (QC-AIM-0031)	Impurity 1: ≤ 2.0% Impurity 2; ≤ 4% No other (new) impurities ≥ 1 %	
Particle aggregate by DLS, (QC-AIM-0028)	≤ 2.0%	
Residual SF+ Protein, (ATM-0162)	< 400 ng/mL (LOQ)	
Residual SF+ DNA, (ATM-0192)	< 0.5 µg/mL (LOQ)	
Residual Baculovirus DNA, (QC-AIM-0024)	≤ 1.2 µg/ml	
Bacterial endotoxins, (SG029)	≤ 1 EU/mL	
Sterility, (SB261)	Sterile	

Remarks :

Conclusion

Authorized signature : _____

Name : _____

Date : _____

Visiting address
Meibergdreef 61
1105 BA Amsterdam
The Netherlands

Postal address
P.O. Box 22506
1100 DA Amsterdam
The Netherlands

tel +31 (0)20 566 7394
fax +31 (0)20 566 9272
info@uniqure.com

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

SCHEDULE 1.10
Certificate of Compliance

Document No:	QA-SOP-XXX-0036-EX	**Preparation of Certificates - Exhibit X: Certificate of Release**	uniQure
Revision No:			
Page No:	1 of 1		
Effective date:			

Product name:		Date manufactured:	
Quantity:		Expiry/retest date:	
Batch number:		Storage conditions:	

Manufacturer:	uniQure
Production Site:	Meibergdreef 61, 1105 BA Amsterdam, The Netherlands

Release tests:

□ : All test results are within approved specifications.

Certification statement:

uniQure is certified by the Dutch Health Authorities (Ministerie van VWS), per manufacturing licence number 108990F, to manufacture biological products (gene therapies).

I hereby certify that this batch has been manufactured at the above-stated site in full compliance with the EU GMP requirements, and meets the authorized quality specifications registered in uniQures' quality systems. The batch manufacturing and analytical records were reviewed and are found to be in compliance with GMP.

Name:	
Position:	Qualified Person
Signature:	
Date:	

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SCHEDULE 1.63
Patents

UniQure Patent Portfolio: GLYBERA

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SCHEDULE 1.66
Product

Glybera: AAV1_LPLS447X

Marketing Authorization Numbers: EU/1/12/791/001

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

SCHEDULE 1.78
Initial Specifications

Module 3 Glybera uniQure
3.2.P.5 [alipogene tiparvovec]

1. SPECIFICATIONS

Before QC testing the samples taken from the drug product batch are stored at the same conditions and subjected to one freeze thaw cycle.

The proposed release and shelf life specifications for Glybera drug product are shown in Table 1 below:

Table 1: Release and shelf life specifications for Glybera

Test parameter	Acceptance Criteria
General tests and tests for contamination	
Appearance	[†]
Colour	[†]
Clarity	[†]
Sub-visible particles	[†]
	[†]
pH	[†]
Osmolality	[†]
Extractable volume	[†]
Identity	
LPL cDNA confirmation by PCR	[†]
Capsid protein composition by microfluidic electrophoresis	[†]
Content	
Genome copies [vector-particle concentration]	[†]
Total protein	[†]
Sucrose by refractive index	[†]
Biological Activity	
Infectious vector titre	[†]
LPL expression (Potency)	[†]

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Purity	
AAV protein purity by microfliudic electrophoresis	[†]
Ratio of full: infectious particles (genome copies: infectious particles) [Ratio of vector-particle concentration to infectious particles]	[†]
Monomeric particles	[†]
Product related impurities	
Protein impurities by microfluidic electrophoresis	[†]
	[†]
	[†]
Particle aggregates	[†]
Process-related Impurities	
Residual *expres*SF+ protein	[†]
Residual *expres*SF+ DNA	[†]
Residual baculovirus DNA	[†]
Contaminants	
Bacterial endotoxins	[†]
Sterility	[†]

1 LOQ
2 LOQ

SCHEDULE 2.2(a)
Trademarks

uniQure's Trademark Portfolio: GLYBERA – uniQure

Catchword	Type	Country	Classes	Appl. No.	Appl. Date	Reg. No.	Reg. date	Ren. Date	Applicant	Status
										
G Device	Logotype	EU	05, 44	8640609	10/26/2009.	8640609	5/10/2010.	10/26/2019.	uniQure IP B.V.	Registered
GLYBERA	Wordmark	EU	05, 44	5901269	5/1/2007.	5901269	5/14/2009.	5/1/2017.	uniQure IP B.V.	Registered
GLYBERA	Wordmark	TR	05	2007026778	17.05.2007	200726778	17.05.2007	17.05.2017	uniQure IP B.V.	Registered
GLYBERA	Wordmark	RU	05	2008707340	13.03.2008	377215	20.04.2009	13.03.2018	Amsterdam Molecular Therapeutics (AMT) Holding N.V.	Registered
GLYBERA	Wordmark	CH	05	551392007	14.05.2007	562178	11.09.2007	14.05.2017	Amsterdam Molecular Therapeutics (AMT) Holding N.V.	Registered
GLYBERA	Wordmark	IS	05	14642007	14.05.2007	8122007	04.07.2007	04.07.2017	Amsterdam Molecular Therapeutics (AMT) Holding N.V.	Registered
GLYBERA	Wordmark	NO	05	200705606	15.05.2007	241553	19.10.2007	19.10.2017	Amsterdam Molecular Therapeutics (AMT) Holding N.V.	Registered
GLYBERA	Wordmark	DZ	05	72791	24.10.2007				Amsterdam Molecular Therapeutics (AMT) Holding N.V.	Pending
GLYBERA	Wordmark	EG	05	208229	22.10.2007				Amsterdam Molecular Therapeutics (AMT) Holding N.V.	Pending

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GLYBERA	Wordmark	MA	05	113550	23.10.2007	113550	23.10.2007	23.10.2017	Amsterdam Molecular Therapeutics (AMT) Holding N.V.	Registered
GLYBERA	Wordmark	TN	05	EE072667	24.10.2007	EE72667	19.05.2009	24.10.2017	Amsterdam Molecular Therapeutics (AMT) Holding N.V.	Registered
 GLYBERA device	Logotype	EU	05, 44	8640641	10/26/2009.	8640641	5/10/2010.	10/26/2019.	uniQure IP B.V.	Registered
UNIQURE	Wordmark	EU	01, 05, 42, 44	10431005	11/21/2011.	10431005	4/25/2012.	11/21/2011.	uniQure IP B.V.	Registered

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SCHEDULE 2.2(b)
uniQure Trademark Guidelines

uniQure

TRADEMARK GUIDELINES

The trademarks of uniQure BiopharmaB.V. and its subsidiary uniQure IP B.V. - hereinafter “uniQure” or “Company” - are valuable and important intellectual property assets of the Company. It is crucial that you protect the value of our trademarks by using them properly. These guidelines, which are updated from time to time, set out our policies for your use of such assets.

If you are a licensee of uniQure trademarks, your license agreement will specify the trademarks that you are authorized to use and may provide additional special trademark usage guidelines. You may NOT use our trademarks in a manner that incorrectly suggests that uniQure sponsors or endorses or is otherwise associated with your activities, products, and services, except as set forth in your license agreement with us.

Registered trademarks:

UniQure is owner of the following trademark registrations in the European Union:

Trademark	Type	Country	goods/services	Reg. No.	Reg. Date
GLYBERA	word	EU	**Class 5**: Pharmaceutical products; biological preparations for use in medical and clinical gene therapy and cell therapy; clinical medical reagents for use in gene therapy; gene diagnosis, and gene testing; pharmaceutical preparations, vaccines for use in gene therapy: gene therapy and prophylaxis products; all the aforementioned goods exclusively in the treatment of metabolic disorders including such disorders which are single gene disorders and disorders which are a result of one more mutations within the lipoprotein lipase gene **Class 44**: Gene delivery, gene transfer, gene regulation and gene modulation for the treatment of metabolic disorders, including such disorders which are single gene disorders, and disorders which are a result of one more mutations within in the lipoprotein lipase gene, ocular disorders	5901269	5/14/2009

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Glybera	word and device	EU	**Class 5**: Pharmaceutical products; biological preparations for use in medical and clinical gene therapy and cell therapy; clinical medical reagents for use in gene therapy, gene diagnosis, and gene testing; pharmaceutical preparations, vaccines for use in gene therapy; gene therapy and prophylaxis products, all the aforementioned goods exclusively in the treatment of metabolic disorders including such disorders which are single gene disorders and disorders which are a result of one more mutations within the lipoprotein lipase gene **Class 44**: Gene delivery, gene transfer, gene regulation and gene modulation for the treatment of metabolic disorders, including such disorders which are single gene disorders, and disorders which are a result of one more mutations within the lipoprotein lipase gene and ocular disorders	8640641	5/10/2010
	device	EU	**Class 5**: Viral systems, gene therapy systems, nucleic acid delivery systems, viral vectors, non-viral vectors, gene therapy vectors, nucleic acid delivery vectors, and cells transformed by viral vectors, non-viral vectors, gene therapy vectors or nucleic acid delivery vectors for medical purposes; pharmaceutical products; biological preparations for use in medical and clinical gene therapy, nucleic acid-based therapy and cell therapy; clinical medical reagents for use in nucleic acid-based therapy, gene therapy, cell therapy, gene diagnosis and gene testing; pharmaceutical preparations, vaccines, prophylaxis products and other products for use in nucleic acid-based therapy, gene therapy and cell therapy **Class 44**: Gene and nucleic acid delivery, gene and nucleic acid transfer, gene and nucleic acid regulation and gene and nucleic acid modulation for the treatment of metabolic disorders, ocular disorders, diseases of the nervous system, blood disorders, liver disorders, muscular disorders, muscular skeletal disorders, cancers, infectious diseases, inflammatory and auto-immune diseases, vascular disorders, inherited disorders, genetic disorders and single gene disorders.	8640609	5/10/2010

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UNIQURE	word	EU	**Class 1**: Viral systems, gene therapy systems, nucleic acid delivery systems, viral vectors, non-viral vectors, gene therapy vectors, nucleic acid delivery vectors, and cells transformed by viral vectors, non-viral vectors, gene therapy vectors and nucleic acid delivery vectors for non-medical research purposes **Class 5**: Viral systems, gene therapy systems, nucleic acid delivery systems, viral vectors, non-viral vectors, gene therapy vectors, nucleic acid delivery vectors, and cells transformed by viral vectors, non-viral vectors, gene therapy vectors or nucleic acid delivery vectors for medical purposes; pharmaceutical products; biological preparations for use in medical and clinical gene therapy, nucleic acid-based therapy and cell therapy; clinical medical reagents for use in nucleic acid-based therapy, gene therapy, cell therapy, gene diagnosis and gene testing; pharmaceutical preparations, vaccines, prophylaxis products and other products for use in nucleic acid-based therapy, gene therapy and cell therapy **Class 42**: Research, product development and consultancy in the field of biotechnology, biologics, pharmaceutics, medical science, chemistry and biochemistry **Class 44**: Gene and nucleic acid delivery, gene and nucleic acid transfer, gene and nucleic acid regulation and gene and nucleic acid modulation for the treatment of metabolic disorders, ocular disorders, diseases of the nervous system, blood disorders, liver disorders, muscular disorders, muscular skeletal disorders, cancers, infectious diseases, inflammatory and auto-immune diseases, vascular disorders, inherited disorders, genetic disorders and single gene disorders.	10431005	4/25/2012

UniQure is also the owner of the other trademark registrations and applications in the Territory identified in Schedule 2.2(a).

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Basic Trademark Rules:

- **The most prominent use** (which is usually the first use of our registered trademarks in a title, heading, and text of a document) should have the superscripted registered trademark symbol ®. If that symbol is not available, then use (R).
- **Distinguish our trademarks**. Visually set off our trademarks from the surrounding text.
- **Our trademarks are never plural or possessive**.
- **Never modify the form of our trademarks**, whether the trademarks are an acronym, word, words or graphic design. Unless otherwise specifically permitted in writing, word trademarks should not be modified by abbreviations, translations or connections (e.g., by a hyphen or otherwise) to other words or trademarks. Our trademarks should not be split over any lines. All logos should be reproduced in strict compliance with the established graphical form.
- **Colors of our trademarks**. The preferred treatment for the company logo is as follows:

The logo has to be displayed in printed letters. Only the “Q” is in upper case.

- **Attribute our trademarks** by properly acknowledging our ownership interest in them (e.g., “Glybera is a trademark or registered trademark of uniQure IP B.V.”). Such attribution statement may appear in any conventional location within a document or packaging (e.g., header, footer, footnote, etc.).

- **Logo, size and proportion treatments**. The “Glybera” word and device mark and the “G” device mark (logos) set forth in the table above must always be reproduced exactly as pictured in the table above, in the specific typefaces shown. No other typefaces are permitted. The logos can be reproduced in color or black& white and may be proportionately enlarged or reduced so long as legibility is ensured. uniQure reserves the right to introduce specific requirements as to the color and font size of its trademarks and logos. The logos are independent trademarks and should not be incorporated into other trademarks, logos, and artwork. The logos may appear in proximity to a licensee’s trademarks and logos and other artwork, but with a clear visual separation.

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- **Inquiries regarding the Trademark Guidelines**. In case of inquiries regarding these Trademark Guidelines uniQure may be contacted at the following address: Meibergdreef 61, 1105 BA Amsterdam, The Netherlands.
- **Updates of the Trademark Guidelines**. uniQure may at any time make changes to these Trademark Guidelines with a future effect. uniQure will give licensee no less than three (3) months prior written notice if changes are made to the Trademark Guidelines.

***

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SCHEDULE 2.3
Definition
Fully Loaded Cost of Goods

Item per 50 L batch	Costs* [EUR]
Clean room occupancy	[†]
Cell bank vial	[†]
Virus banks vials	[†]
Raw materials	[†]
External release assays (QC)	[†]
External QP	[†]
Personnel (MF, QC, QA)	[†]
Packaging (incl. release)	[†]
Stability study batch allocation	[†]
Total	[†]

Norms:

Number of patients per batch [†]

Batch success rate [†]%

Result Fully loaded costs:

COG per patient **EUR [†]***

COG per batch **EUR [†]***

COG relevant for Glybera Manufacturing Cost Reimbursement:

COG per patient **EUR [†]***

COG per batch **EUR [†]***

* = as of the Effective Date

SCHEDULE 2.4(d)
Minimum Order Quantity

The minimum Order Quantity is [†] patient doses.

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SCHEDULE 2.6
Technology Transfer

The following is a non-exhaustive list describing key steps which the Parties would typically envisage for a transfer of the Manufacturing of the Product to another manufacturing site:

Steps	Estimated Timelines
• if transferred to a Third Party manufacturer: select and contract manufacturer party	[†]
• tech transfer (on paper)	[†]
• obtain time slot	[†]
• process validation at CMO	[†]
• file type II variation	[†]
• review and approval type II variation	[†]
Total	**[†]**

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SCHEDULE 3.1
MA/MAA Filing and Maintenance Activities and Fees Template

State	Activity	Fee Allocation	Responsible Party	Timeline
Albania				
Andorra				
Bosnia and Herzegovina				
Croatia				
Macedonia				
Monaco				

Montenegro

Republic of San Marino

Serbia

Switzerland

Vatican City

Algeria

Armenia

Azerbaijan

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Belarus

Brazil

China

Egypt

Georgia

Kazakhstan

Kirghizstan

Mexico

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Moldova

Morocco

Pakistan

Russia

Tajikistan

Tunisia

Turkey

Turkmenistan

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Ukraine

Uzbekistan

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SCHEDULE 3.2
Regulatory Plan

A. For the EU Member States:

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Regulatory plan for Glybera

1. Quality

1.1 Specific Obligations

[†]

Source	Name	Description	Due date	Status	Progress
[†]	[†]	[†]	[†]	[†] [†]	[†] [†]
[†]	[†]	[†]	[†]	[†] [†]	[†] [†]
[†]	[†]	[†]	[†]	[†] [†]	[†] [†]
[†]	[†]	[†]	[†]	[†] [†]	[†] [†]

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Source	Name	Description	Due date	Status	Progress
[†]	[†]	[†]	[†]	[†]	[†] [†]
[†]	[†]	[†]	[†]	[†]	
[†]	[†]	[†]	[†]	[†]	
[†]	[†]	[†]	[†]	[†]	
		[†]			

The [†] has been submitted [†].

1.2 Commitments

The commitments listed below [†].

Source	Name	Description	Due date	Status
[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]

1.3 Other variations

Variation	Description	Plannedsubmission date	Status
[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]

* To be integrated in the stability programme as part of [†]

2. Clinical

Specific Obligations as agreed during the authorisation procedure as described in[†].

[†]	[†]	[†]	[†]
[†]			
[†]	[†]	[†]	[†]
[†]			
[†]	[†]	[†]	[†]

3. Paediatric Investigation Plan

[†]

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B. For the Territory outside of the EU Member States:

The Parties shall agree upon the Regulatory Plan for any remaining countries of the Territory outside of the EU Member States in the first meeting of the JCC after the Effective Date.

SCHEDULE 7.3
Existing Third Party Licenses

Overview:

Licensor	Title of Agreement	Date	Relevant Intellectual Property Rights (including quality of license, i.e. exclusive / non-exclusive rights)
Xenon Pharmaceuticals Inc. (formerly Xenon Genetics Inc.)	Sublicense and research agreement between Xenon Genetics Inc. and Amsterdam Molecular Therapeutics BV	June 18, 2001	Exclusive sublicensable, not further sublicensable without written consent
[†]	[†] License Agreement - Nonexclusive	May 2, 2007	Non-exclusive, sub-licensable upon written approval prior review
[†]	License agreement	December 5, 2006	Non-exclusive, non-sublicensable
	Amendment No1 to the license agreement	March 12, 2012	

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[†]	License agreement	December 20, 2006	Exclusive, non-transferable and non-assignable
[†]	License agreement between[†]and Amsterdam Molecular Therapeutics BV[†]	February 8, 2008	Non-exclusive, non-transferable
[†]	Non-exclusive license agreement	September 3, 2010	Non-exclusive, sublicensable
[†]	License agreement – non-exclusive [†]	March 22, 2007	Non-exclusive, non-sublicensable
	License agreement – non-exclusive [†]	June 13, 2012	Exclusive (with respect to Product), sublicensable

Text of Agreements:

[*full text of agreements to be provided to Chiesi on CD-ROM within [†]Business Days after signing of this Agreement*]

SCHEDULE 8.1(a)
Commercially Reasonable Efforts

At all times during the Term Chiesi shall in no event use less than Commercially Reasonable Efforts to Commercialize the Product as further described in this Schedule 8.1(a). Such efforts shall include:

Compliance with Marketing Plan and Budget

Chiesi shall perform all activities related to the Commercialization of the Product set forth in the marketing plan and budget to be agreed upon between the Parties annually (the "Marketing Plan"). The Marketing Plan shall require Chiesi to perform promotional activities typically applied in the pharmaceutical industry for orphan drugs, to draw the attention and interest to the Product and to render technical support to explain the efficacy of the Product, including detailing and training physicians, pharmacists or other prescribers. The detailing of the Products shall include: (a) regular visits and calls made to physicians and pharmacists by Chiesi's marketing/detailing staff to provide Product information; and (b) activities implemented to call the attention of physicians, pharmacists and other prescribers such as organizing conferences, seminars, physicians- and pharmacists training sessions(including responsibility of the risk management plan (RMP) required with training materials in local language), lectures, mailings with announcements and product brochures, publications in professional magazines, and participation in trade exhibitions or symposia, subject to the requirements and limitations of any Applicable Laws.

The Marketing Plan shall further include details on the responsibility of Chiesi for (a) the provision and review of marketing materials, (b) training and maintaining a sufficient number of suitably qualified sales force, (c) training and maintaining a sufficient number of suitably qualified medical personnel, (d) collection and conveyance to uniQure of general market data (including customer requirements with respect to the Product; market analysis; and competition.

The Marketing Plan for[†], attached hereto as Appendix A, sets forth the obligations of Chiesi in connection with the First Commercial Sale of the Product in the Territory.

Allocation of Minimum FTEs

Chiesi shall allocate a minimum number of FTEs in the Territory as follows ("Minimum FTEs"):

- [†]after the Effective Date: [†] FTEs
- [†]after the Effective Date: [†] FTEs
- [†]after the Effective Date: [†] FTEs
- [†]after the Effective Date: [†] FTEs

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- [†]after the Effective Date: [†] FTEs

Beginning in[†], prior to[†] of each year, Chiesi shall submit the Marketing Plan for any subsequent years to uniQure for its review and approval, which shall not be unreasonably withheld or delayed.

Setting of Target Price

First Submission ([‡]) by[‡]

Notwithstanding the provisions hereunder, but without prejudice to Section 4.1(f)(ii), the Parties hereby agree that[†] shall submit a dossier to the competent reimbursement body in [†] ([†]) before[†], which shall include a target manufacturer selling price (*[†]*) (the "Target Price") of no less than EUR [†]. In case upon further investigation [†]. The Target Price submitted to the [†] is to be used as reference price in the other European countries mentioned below and hence such Target Price shall be used for all submissions by [†] in such other European countries.

[†] shall start with the Commercialization of the Product in [†] irrespective of the competent reimbursement body having rendered its final decision, provided all other requirements to start Commercializing the Product in[†] have been fulfilled.

Timelines for Price and Reimbursement Submissions in other European countries by Chiesi, unless otherwise agreed upon between the Parties in due course

[†]

[†]Before end of : timeline to be agreed upon between the Parties after having obtained the Price and Reimbursement Approval in [†]

[†]: Before end [†]

SCHEDULE 8.1(b)
Approved Activities

1. [†]Agreement: EUR [†]plus travel costs for [†](consisting of EUR [†] including[†], plus excluding [†]costs)
2. [†]Agreement: EUR [†]
3. Development of the[†]for the development of the [†]will be covered by [†].
4. [†]Advisory board: Approx. EUR [†]

SCHEDULE 9.1 Upstream Licenses Relevant for Condition Precedent

Licensor	Title of Agreement	Date	Note
Xenon Pharmaceuticals Inc. (formerly Xenon Genetics Inc.)	Sublicense and research agreement between Xenon Genetics Inc. and Amsterdam Molecular Therapeutics BV	June 18, 2001	Exclusive sublicensable, not further sublicensable without written consent
[†]	[†]	May 2, 2007	Non-exclusive, sub-licensable upon written approval prior review
[†]	License agreement	December 5, 2006	Non-exclusive, non-sublicensable
	Amendment №1 to the license agreement	March 12, 2012	
[†]	License agreement	December 20, 2006	Exclusive, non-transferable and non-assignable

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[†]	License agreement between[†] and Amsterdam Molecular Therapeutics BV[†]	February 8, 2008	Non-exclusive, non-transferable

Note:

The Parties agree that the condition precedent may be fulfilled not only by subcontracting of the rights and licenses licensed by uniQure as licensee under the Existing Third Party Licenses but also by equivalent arrangements mutually agreed between the Parties and the respective Third Party licensor (for instance in cases, where the Third Party licensor (such as [†]) is of the opinion that a sublicense is not required for the activities performed by Chiesi, its Affiliates and Sub-distributors in connection with this Agreement).

Exhibit 10.3

XENON PHARMACEUTICALS INC.

and

GENENTECH, INC.

and

F. HOFFMANN-LA ROCHE LTD

COLLABORATIVE RESEARCH AND LICENSE AGREEMENT

DECEMBER 22, 2011

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COLLABORATIVE RESEARCH AND LICENSE AGREEMENT

This Agreement is made December 22, 2011 (the "**Effective Date**")

BETWEEN:
On the one hand:

XENON PHARMACEUTICALS INC., a Canadian corporation having its principal place of business at 3650 Gilmore Way, Burnaby, British Columbia, V5G 4W8

("**Xenon**")

AND:
On the other hand:

GENENTECH, INC., a California corporation having its principal place of business at 1 DNA Way, South San Francisco, California, USA 94080 ("**GNE**")

together with

F. HOFFMANN-LA ROCHE LTD, a Swiss corporation with its principal place of business at Grenzacherstrasse 124, CH 4070 Basel, Switzerland ("**Roche**")

(GNE and Roche, collectively, "**Genentech**")

RECITALS

WHEREAS:

A. Each of Xenon and Genentech has proprietary technology and scientific expertise relating to research of compounds for the treatment of chronic and acute pain in humans;

B. Genentech has expertise in developing, marketing and selling pharmaceutical products; and

C. Xenon and Genentech wish to collaborate on the research of compounds that are modulators of NaV1.7, upon the terms set out in this Agreement, and Genentech shall develop, manufacture and sell products containing such compounds.

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WITNESSES THAT, in consideration of the premises and the mutual covenants contained herein, Xenon and Genentech agree as follows:

ARTICLE 1
DEFINITIONS/INTERPRETATION

1.1 Definitions

In this Agreement:

"**Affiliate**" means any Person that, directly or indirectly (through one or more intermediaries) controls, is controlled by, or is under common control with a Party. For purposes of the foregoing, "control" means:

(i) the direct or indirect ownership of fifty percent (50%) or more of the voting stock or other voting interests or interest in the profits of a Party, or

(ii) the ability to otherwise control or direct the decisions of board of directors or equivalent governing body thereof.

Notwithstanding the foregoing, unless expressly specified otherwise, for the purposes of this Agreement, Chugai Pharmaceutical Co., Ltd, and all entities controlled by Chugai Pharmaceutical Co., Ltd (collectively, "**Chugai**"), shall not be considered an Affiliate of Genentech unless and until GNE or Roche provides written notice to Xenon specifying Chugai as an Affiliate of Genentech.

"**Agreement**" means this Agreement, including the Schedules hereto and any written agreement, document or instrument entered into, made or delivered pursuant to the terms hereof, and as any of them may from time to time be supplemented or amended.

"**Alliance Manager**" has the meaning given to that term in Section 3.1.

"[†] **Project**" has the meaning given to that term in Section 3.9.

"**Applicable Law**" means all applicable laws, rules, regulations, guidelines and policies that apply to the performance of either Party's obligations under this Agreement (including disclosure obligations as required by any stock exchange or securities commission having authority over a Party) to the extent applicable to such Party.

[†]

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"Biosimilar Product" means a product:

(i) **[†]**; or

(ii) **[**†].

"**Books and Records**" means, in whatever media, all books and records, documents, reports and accounts in connection with or relating to any research activities pursuant to this Agreement.

"**Business Day**" means any day other than a Saturday, Sunday, or commercial holiday in either Vancouver, British Columbia or San Francisco, California or such other day when the general operations of a Party are closed.

"**Calendar Quarter**" means the period of three calendar months ending on each of March 31, June 30, September 30, and December 31.

"Ceases Development" or "Ceased Development" [†].

"**Change of Control Event**" has the meaning set out in Section 16.1.

"**CFR**" means the US Code of Federal Regulations.

"**Collaboration Compound**" means a Compound that is:

(i) Controlled by Xenon as of the Effective Date or during the Research Term (but, for greater certainty, excludes any Compound that is Controlled by a Third Party prior to the date that such Third Party becomes an Affiliate of Xenon);

(ii) Controlled by Genentech as of the Effective Date and that as of the Effective Date Genentech has identified as a Compound;

(iii) conceived, identified or first made by Xenon solely or jointly with Genentech during the Research Term;

(iv) conceived, identified or first made solely by Genentech and/or by a Third Party on behalf of Genentech, during the Research Term, and results from activities under the Research Program;

(v) A SMC that (A) [†], or (B) [†]; or

(vi) A LMC that [†].

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"**Collaboration IP**" means any Intellectual Property conceived, identified, or first made after the Effective Date:

(i) by solely (A) employees of Xenon or a Xenon subcontractor (as permitted under Article 3.7(a)), or solely (B) employees of Genentech or a Genentech subcontractor (as permitted under Article 3.7(b)) or jointly (A) and (B), during the course of, in furtherance of, and as a result of a Party performing its activities under the Research Program; or

(ii) [†],

in each case (i) and (ii) above, that[†].

"**Commencement of Phase II Clinical Trial**" means the first dosing of the first human subject in a Phase II Clinical Trial.

"**Commencement of Phase III Clinical Trial**" means the first dosing of the first human subject in a Phase III Clinical Trial.

"**Commercialization**" or "**Commercialize**" means any activities directed to marketing, advertising, promoting, detailing, distributing, importing, exporting and selling of Licensed Products.

"**Compound**" means a chemical or protein-based compound (other than XEN402, XEN403, and [†]), that [†] NaV1.7 [†].

"**Confidential Information**" means a Party's non-public proprietary Know-How or other non-public information (whether or not patentable) regarding a Party's research, Development, Manufacturing and Commercialization activities and its technology, products, business information and objectives. "Confidential Information" shall expressly include all technical or business information of a Party disclosed at a meeting of the JRC (including all written reports made to the JRC during the Research Term) or included within a Genentech Post Research Term Report.

"**Consumer Price Index**" means the Consumer Price Index – All-items, applicable to Vancouver, British Columbia, as published by Statistics Canada, or if such Index is no longer published, then the Index most comparable thereto.

"**Control**" or "**Controlled**" means, with respect to any Intellectual Property, the possession (whether by license, other than pursuant to this Agreement, or ownership) by a Party of the ability to grant to the other Party access and/or a license as provided herein without violating the terms of any agreement or other arrangement, existing before, on or after the Effective Date with any Third Party.

"**Covering**", "**Cover**", or "**Covered**" means, with respect to a Compound, Collaboration Compound, Licensed Product, Diagnostic Product, XEN402 or XEN403 (as applicable), that[†].

"**Development**" or "**Develop**" means the conduct of all formulating, preclinical and other testing, clinical and other studies, and other activities (including test method development, toxicology studies, statistical analysis and report writing, packaging, labelling and regulatory affairs, product approval and registration activities) necessary or desirable to obtain and maintain Regulatory Approval.

"**Development Candidate**" means [†].

"**Diagnostic Product**" means an assay, test, test kit, or service used for the purpose of Developing or Commercializing Compounds.

"**Diagnostic Royalty Product**" means a Diagnostic Product:

(a) that [†]; or

(b) that, [†].

"**Diagnostic Product Net Sales"** means, with respect to sales or other dispositions of a Diagnostic Royalty Product, [†]:

(a) [†];

(b) [†];

[†].

Further, in the event that Genentech or Genentech's Sublicensees or Genentech Licensee (as applicable)[†] (unless such other product is one to which Xenon is entitled to payments under Article 7 or Article 8 hereunder), Xenon and Genentech shall agree upon [†] for purposes of calculation of Diagnostic Product Net Sales for that Diagnostic Royalty Product.

For the purposes of Diagnostic Product Net Sales, the following definitions apply:

(1) [†].

(2) [†].

"**Diagnostic Product Royalty**" has the meaning given to that term in Section 8.9.

"**Diagnostic Royalty Term**" means, in respect of each Diagnostic Product unless earlier terminated pursuant to the provisions of Article 12, on a Diagnostic Product-by-Diagnostic Product and country-by-country basis within the Territory:

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(a) For Diagnostic Products to which Section (A) of the Diagnostic Product definition is applicable:

the period commencing on the date of the First Commercial Sale of such Royalty Product in that country and ending on the expiration of the last to expire of the Valid Claims of the applicable Patent Rights Covering such Royalty Product in such country; and

(b) For Diagnostic Products to which Section (B) of the Diagnostic Product definition is applicable:

the period commencing on the Patent Rights Loss Date of such Royalty Product in that country, and ending on the tenth (10th) anniversary of the First Commercial Sale of such Royalty Product in such country.

"**Diligent Efforts**" means:

(a) In respect of Genentech, [†]; and

(b) In respect of Xenon, [†].

"Disclosure" has the meaning set out in Section 11.4.

"**Effective Date**" has the meaning set out at the beginning of this Agreement.

"**ED-Go**" means Genentech's internal approval of a program to begin IND-enabling toxicology studies [†].

"**EMA**" means the European Medicines Agency, or a successor agency thereto.

"**EU**" means the European Union, or any Major EU Country.

"**First Commercial Sale**" means, with respect to a Compound or Licensed Product or Diagnostic Product, the first bona fide sale of such compound or product to a Third Party by or on behalf of Genentech or its Sublicensees or Genentech Licensee (as applicable) in a country in the Territory after Regulatory Approval has been achieved for such compound or product in such country. For greater certainty, sales for test marketing, sampling and promotional uses, Clinical Trial purposes or compassionate or similar use shall not be considered to constitute a First Commercial Sale.

"**FTE**" means the equivalent of a full-time employee's work time over a twelve (12) month period (including normal vacations, sick days and holidays applicable to each Party). The portion of an FTE year devoted by an employee to the Research Program shall be determined [†].

"**FTE Rate**" shall mean the amount Genentech will pay to Xenon over a consecutive twelve (12) month period during the Research Term to support one (1) Xenon FTE dedicated to the Research Plan. The FTE Rate shall be (i) [†] and (ii) [†].

"**Genentech Background IP**" means:

(i) Genentech Background Know-How; and

(ii) Genentech Background Patent Rights.

"**Genentech Background Know-How**" means all Know-How that: (i) is Controlled by GNE as of the Effective Date; (ii) is not generally known; and (iii) is necessary or useful for the work to be undertaken by Xenon pursuant to the Research Program.

"**Genentech Background Patent Rights**" means all Patent Rights Controlled by GNE as of the Effective Date that are necessary or useful for Xenon to conduct research pursuant to the Research Program.

"**Genentech Collaboration IP**" means the Collaboration IP Controlled by Genentech, including Genentech's interest in Joint Collaboration IP.

"**Genentech Indemnified Parties**" has the meaning set out in Section 15.2.

"**Genentech Licensee**" has the meaning set forth in Section 9.3.

"**Genentech Termination IP**" means:

(a) [†]; and

(b) [†],

in each (a) and (b) that [†].

"**GLP**" means, at any time, the then current Good Laboratory Practices as such term is defined from time to time by the FDA, or comparable standards or requirements of other relevant Regulatory Authority within the Territory.

"**GLP Toxicology Study**" means a pharmacokinetic and/or toxicology study conducted under GLP for filing an IND.

"GMP Manufacturing" means the Manufacturing of a Product, pursuant to the then current Good Manufacturing Practices as such term is defined from time to time by the FDA or comparable standards or requirements of other relevant Regulatory Authority having jurisdiction over the Development, Manufacture or Commercialization of the Product within the Territory.

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"**Half Year**" means the six (6) month period from (i) January 1 through June 30 or (ii) July 1 through December 31 of any Year.

[†]

"**IND**" means an Investigational New Drug Application (as defined in the US *Food, Drug and Cosmetic Act*) filed with the FDA or the counterpart application filed with any other applicable Regulatory Authority.

"**IND Approval**" means the approval of an IND by the FDA or other applicable Regulatory Authority.

"**Indication**" means any of:

(i) [†];

(ii) [†];

(iii) [†];

(iv) [†]; or

(v) [†].

"**Intellectual Property**" means Patent Rights, Know-How, trade names, trademarks, copyright, trade dress, industrial and other designs, and all other forms of intellectual property, all whether or not registered, or capable of registration.

"**Joint Collaboration IP**" means Collaboration IP that is conceived, identified or first made jointly by Xenon and Genentech.

"**JRC**" has the meaning set out in Section 3.2(a).

[†]

"**Know-How**" means any know-how, inventions, discoveries, trade secrets, information, data and materials including ideas, concepts, formulas, methods, processes, techniques, procedures, designs, compositions, plans, applications, research, preclinical and clinical data, regulatory information, manufacturing process, scale-up and other technical data, reports, documentation and samples. Know-How excludes Patent Right(s).

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"**Know-How Royalty Term**" means, in respect of each SMC Know-How Royalty Product unless earlier terminated pursuant to the provisions of Article 12, [†],

(a) For SMC Know-How Royalty Products to [†]:

[†]; and

(b) For SMC Know-How Royalty Products [†]:

[†].

"Licensed IP" means Xenon Background IP, Xenon Collaboration IP and Post-Research Term IP.

"**Licensed Product**" means any Product containing a Compound as an active ingredient.

"**LMC"** means a Compound other than a SMC.

"**LMC Licensed Product**" means a Licensed Product that contains an LMC as an active ingredient.

"**LMC Milestone Product**" means a LMC Licensed Product that:

(a) [†]; or

(b) [†]:

(i) [†];

(ii) [†]; or

(iii) [†].

"**LMC Royalty**" has the meaning given to that term in Section 8.3.

"**LMC Royalty Product**" means a LMC Licensed Product that:

(a) [†]; or

(b) [†]:

(i) [†];

(ii) [†]; or

(iii) [†]

"**LMC Royalty Term**" means the period of time under which an LMC Royalty is payable pursuant to Section 8.3.

[†]

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

"**Major EU Country**" means Germany, France, the United Kingdom, Spain or Italy.

"**Manufacture**" or "**Manufacturing**" means all activities associated with the production, manufacture, processing, filling, finishing and packaging, as applicable, for research, Development or Commercialization, as the case may be, including process development, manufacturing scale-up, quality stability testing, impurity characterization, assurance and quality control.

"**Milestone Event**" means an R&D Milestone Event, Regulatory Milestone Event, Sales Milestone Event or Second Indication Milestone Event, as the case may be.

"**Milestone Payments**" means each of the payments described in Sections 7.2, 7.3, 7.4 and 7.5.

"Molecularly Selective NaV1.7 Modulators" shall mean [†].

"**NaV1.7**" means the voltage gated sodium channel polypeptide having the sequence described in Schedule A and mutant and splice variants thereof.

"**NDA**" means an application submitted to a Regulatory Authority in any jurisdiction seeking approval to market and sell a Product, including a United States New Drug Application filed with the FDA pursuant to 21 CFR 314.50 of the US *Food, Drug and Cosmetic Act*, or any application in any country corresponding to a United States New Drug Application, and all supplements and amendments that may be filed in respect to such application.

"**NDA Approval**" means approval by a Regulatory Authority of an NDA.

"**NDA Filing**" means the filing with the applicable Regulatory Authority of a New Drug Application for a Product, and all amendments and supplements thereto.

"**Net Sales**" with respect to a Licensed Product shall mean [†]:

(i) [†]; and

(ii) [†]; and

(iii) [†],

(a) Sales among Genentech and its Sublicensees and/or Genentech Licensee (as applicable). Sales between or among GNE, Roche, and/or their respective Sublicensees and/or Genentech Licensee (as applicable) shall be excluded from the computation of Net Sales, but Net Sales shall include the first sale to a Third Party by GNE, Roche, and any of their respective Sublicensees and/or Genentech Licensee (as applicable).

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(b) Supply as Samples/Test Materials. Notwithstanding anything to the contrary in the definition of Net Sales, the supply or other disposition Licensed Products (i) as samples; (ii) for use in non-clinical or clinical studies; (iii) [†] or (iv) [†], shall not be included in the computation of Net Sales.

(c) Licensed Products Sold in Combinations.

(i) [†].

(ii) [†].

(iii) [†].

[†].

[†]:

(i) [†];

(ii) [†];

(iii) [†];

(iv) [†]; and

(v) [†].

"**Party**" means Genentech or Xenon; "**Parties**" means Genentech and Xenon.

"**Patent Rights**" means any patents, patent applications (and any patents to issue therefrom), including provisional applications and any corresponding or other applications for patent filed in any jurisdiction based upon or claiming priority from any such patents or patent applications, including all divisionals, continuations, continuations-in-part, reissues, extensions, substitutions, re-examinations, renewals, supplemental protection certificates, pipeline patents, patents of importation or patents of addition to any of the foregoing.

[†]

"**Person**" means any individual, partnership, corporation, trust or any other entity that has legal capacity to own property in their own name or to sue or be sued.

"**Phase II Clinical Trial**" means a human clinical trial of a Product that is designed to elicit initial evidence of clinical safety and activity in a target patient population as required by a Regulatory Authority.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

"**Phase III Clinical Trial**" means a human clinical trial of a Product that is designed to establish that the Product is safe and efficacious for its intended use, and to determine warnings, precautions and adverse reactions that are associated with such Product in the dosage range to be prescribed, which trial is intended to support marketing approval by the FDA under the US *Food, Drug, and Cosmetic Act*, or a similar Regulatory Authority in a jurisdiction outside of the United States.

"**Post-Research Term IP**" means [†]:

(i) [†];

(ii) [†];

(iii) [†];

(iv) [†]; and

(v) [†].

[†].

"**Product**" means any pharmaceutical product that contains or is comprised of one or more Compounds.

"**Project Leader**" means the representative designated by each Party pursuant to Section 3.2(b) who will have responsibility for overseeing the day-to-day activities of such Party with respect to the Research Program and for being the primary point of contact between the Parties with respect to the Research Program.

"**R&D Milestone Event**" has the meaning given to that term in Section 7.2.

"**Regulations**" means regulations, statutes, rules, guidelines and procedures promulgated by a Regulatory Authority pursuant to Applicable Laws.

"**Regulatory Approval**" means, with respect to any country, any and all approvals (including any applicable governmental price and reimbursement approvals), licenses, registrations, or authorizations of any Regulatory Authority necessary for the Manufacture, use, storage, import, transport, promotion, marketing and commercial sale (including packaging and labelling) of a product for human use in a country, including approvals of biologics license applications, new drug applications and product license applications (and their respective foreign counterparts).

"**Regulatory Authority**" means any federal, national, multinational, state, provincial or local regulatory agency, department, bureau or other governmental entity with authority to grant a Regulatory Approval or having jurisdiction over the testing, manufacture, use, storage, import, transport, promotion, marketing or sale of a health care product in a country.

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"**Regulatory Milestone Event**" has the meaning given to that term in Section 7.3.

"**Research Plan**" means the written plan of research activities to be conducted by or on behalf of the Parties pursuant to this Agreement as further described in Section 3.6. The initial Research Plan is attached as Schedule B hereto.

"**Research Program**" means the research activities to be conducted by the Parties as set out in the Research Plan.

"**Research Term**" means the term of the Research Program described in Section 2.4.

"**Royalty**" means an SMC Royalty, SMC Know-How Royalty, LMC Royalty or Diagnostic Product Royalty, as the case may be.

"**Royalty Payment**" means a royalty payment required to be paid pursuant to Article 8.

"**Royalty Product**" means an SMC Royalty Product, an LMC Royalty Product, or a Diagnostic Royalty Product, as the case may be.

"**Sales**" has the meaning set forth above within the definition of Net Sales.

"**Sales Milestone Event**" has the meaning given to that term in Section 7.4.

"**Second Indication Milestone Event**" has the meaning given to that term in Section 7.5.

"**SMC**" means a Compound having a molecular weight of less than [†] g/mol.

"**SMC Know-How Royalty**" has the meaning given to that term in Section 8.2.

"**SMC Know-How Royalty Product**" means:

(a) a SMC Licensed Product that [†]:

(i) [†],

(ii) [†], or

(iii) [†]; or

(b) a SMC Licensed Product:

(a) that, [†]; and

(b) that, [†].

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

"**SMC Licensed Product**" means a Licensed Product that contains an SMC as an active ingredient.

"**SMC Milestone Product**" means a SMC Licensed Product that:

(a) [†]; or

(b) [†]:

(i) [†];

(ii) [†]; or

(iii) [†].

"**SMC Royalty**" has the meaning given to that term in Section 8.1.

"**SMC Royalty Product**" means a SMC Licensed Product:

(a) that [†]:

(i) [†],

(ii) [†], or

(iii) [†]

(b) that [†]:

(i) [†],

(ii) [†], or

(iii) [†].

"**SMC Royalty Term**" means, in respect of each SMC Royalty Product, [†].

"Sublicense" means a sublicense granted pursuant to, and in accordance with, the provisions of Section 9.3.

"Sublicensee" means a Person to whom a Sublicense is granted.

"**Substances"** has the meaning given to that term in Section 4.5.

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"**Term**" means the term of this Agreement as set out in Section 12.1.

"**Termination Compounds**" means [†].

"**Termination Compound Product**" means [†].

"**Territory**" means all of the countries of the world.

"**Third Party**" means any Person other than a Party.

"**US**" means the United States of America.

"**Valid Claim**" means a claim of any issued, unexpired patent which has not been revoked or held unenforceable or invalid by a decision of a court or governmental agency of competent jurisdiction from which no appeal can be taken, or with respect to which an appeal is not taken within the time allowed for appeal, and which has not been disclaimed, denied or admitted to be invalid or unenforceable through reissue, disclaimer or otherwise.

[†].

"**XEN402**" means that certain compound described in the Xenon PCT Publication [†] that was disclosed in confidence to Genentech prior to the Effective Date, pursuant to the Mutual Confidentiality Agreement between the Parties dated July 15, 2011, as amended. For greater certainty, "XEN402" includes [†].

"**XEN403**" means that certain compound described in the Xenon PCT Publication [†] that was disclosed in confidence to Genentech prior to the Effective Date, pursuant to the Mutual Confidentiality Agreement between the Parties dated July 15, 2011, as amended. [For greater certainty, "XEN403" includes [†].

"**Xenon Background IP**" means:

(i) Xenon Background Know-How; and

(ii) Xenon Background Patent Rights.

For avoidance of doubt, Xenon Background IP does not include [†].

"**Xenon Background Know-How**" means all Know-How that: (i) is Controlled by Xenon as of the Effective Date; (ii) is not generally known; and (iii) is necessary or useful for the work to be undertaken by Genentech pursuant to the Research Program and/or is necessary or useful to make, use, sell, offer for sale or import Collaboration Compounds, Licensed Products or Diagnostic Products.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

"**Xenon Background Patent Rights**" means all Patent Rights Controlled by Xenon as of the Effective Date that are necessary or useful to make, use, sell, offer for sale or import Collaboration Compounds, Licensed Products or Diagnostic Products. All such Xenon Background Patent Rights are set out in Schedule C.

"**Xenon Collaboration IP**" means the Collaboration IP Controlled by Xenon, including Xenon's interest in Joint Collaboration IP.

"**Xenon Indemnified Parties**" has the meaning set out in Section 15.1.

"**Year**" means a period of one year beginning on January 1 and ending on (and including) December 31 of that year.

1.2 Interpretation

(a) Headings in this Agreement are solely for the convenience of reference and shall not be used for purposes of interpreting or construing the provisions hereof.

(b) All references in this Agreement to a designated "Article", "Section", "Subsection" or other subdivision or to a Schedule are to the designated Article, Section, Subsection or other subdivision of, or Schedule to, this Agreement.

(c) The words "herein", "hereof" and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular Article, Section, Subsection or other subdivision or Schedule.

(d) The word "including", when following any general statement, term or matter, is not to be construed to limit such general statement, term or matter to the specific items or matters set forth immediately following such word or to similar items or matters, whether or not non-limiting language (such as "without limitation" or "but not limited to" or words of similar import) is used with reference thereto, but rather is to be construed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement, term or matter.

(e) All references to currency, dollar or $ are deemed to mean lawful money of the US.

(f) Any reference to a statute includes and is a reference to such statute and to the regulations made pursuant thereto, with all amendments made thereto and in force from time to time, and to any statute or regulations that may be passed which has the effect of supplementing or superseding such statute or such regulations.

(g) Words imparting the masculine gender include the feminine or neuter gender and words in the singular include the plural and vice versa.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(h) This Agreement has been prepared jointly by the Parties, each having access to legal counsel of its choice, and shall not be strictly construed or interpreted in favour of or against either Party.

(i) All references to Genentech shall be interpreted to refer to both GNE and Roche and (a) all obligations and liabilities imposed on Genentech by this Agreement shall be the joint and several liabilities of both GNE and Roche and (b) all rights and licenses granted to Genentech by this Agreement shall enure to the benefit of each of GNE and Roche jointly and severally. Rights and or obligations assigned specifically to either GNE or Roche hereunder shall be the right and/or obligation of the Party so named.

ARTICLE 2
RESEARCH PROGRAM

2.1 General

The Research Program shall be conducted as a collaborative effort in accordance with this Article 2 and Article 3. Each Party shall carry out its obligations under the Research Program as described in the Research Plan pursuant to the provisions of this Agreement. Each Party shall comply with all laws, rules and regulations applicable to the conduct and documentation of its Research Program activities. Each Party shall, in performing its obligations under the Research Program, assign responsibilities to those portions of its organization that have the appropriate resources, expertise and responsibility for such obligations. The Parties shall use Diligent Efforts to conduct their respective tasks under the Research Program.

2.2 Research Program Costs

Except as otherwise expressly provided in this Agreement, each Party shall bear its own costs of performing its obligations under the Research Program.

2.3 Amendments to the Research Program

The JRC may modify the Research Plan from time to time in accordance with Section 2.5 and Article 3, provided that, in the event of a conflict between the terms of this Agreement and the Research Plan, the terms of this Agreement shall govern.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

2.4 Research Term

Except as otherwise provided under Section 16.1(b) below, the term of the Research Program shall commence on the Effective Date and continue for [†], unless the Parties agree to extend such term beyond the initial [†]. The Parties may extend the term of the Research Program on a year-by-year basis, by mutual written agreement of authorized representatives of each Party, initially at least [†] days prior to the [†] anniversary of the Effective Date and, thereafter, at least [†] days prior to each subsequent anniversary of the Effective Date, and the JRC shall, in such case, amend the Research Plan as necessary.

2.5 Xenon FTE Funding

(a) For the duration of the initial [†] years of the Research Term and any extension thereof, Xenon shall commit and Genentech shall fund, on a Calendar Quarter basis (pro-rated for any period of less than three (3) months at the beginning or end of the Research Term), the number of FTEs of Xenon as set forth in the Research Plan at the FTE Rate. For avoidance of doubt, throughout the initial [†] years of the Research Term, the number of FTEs of Xenon funded by Genentech shall not be less than [†] FTEs. Upon Genentech's request, Xenon will provide a resume or curriculum vitae for one or more individual FTEs for Genentech's review.

(b) Xenon shall invoice Genentech at the start of each Calendar Quarter during the Research Term for the number of FTEs assigned to the Research Program for such Calendar Quarter under the then-current Research Plan, provided that such invoice shall provide an adjustment for any difference between the number of FTEs invoiced in the prior Calendar Quarter and the actual number of FTEs performing under the Research Plan in such previously invoiced Calendar Quarter. Genentech shall pay Xenon within thirty (30) days of receipt of the invoice.

(c) During the Research Term, [†].

(d) In the event that the Parties extend the Research Term beyond the initial term of [†] years, for each year that the Research Term is extended, [†] from the commencement of the prior year of the Research Term until the end of such prior year of the Research Term.

2.6 FTE Records

Xenon shall keep complete and accurate records of its FTE's work time (including normal vacations, sick days and holidays) attributed to the Research Program for a period of two (2) years following each Calendar Quarter concerned and Genentech shall be entitled from time to time, but not more that once each Year and only once with respect to records covering any specific period of time, to review such records at its expense in the location where such records are maintained upon reasonable notice and during regular business hours and under obligations of strict confidence, for the sole purpose of verifying the FTE's work time attributed to the Research Program. If the review of such records reveals that Xenon has failed to accurately report information pursuant to this Section 2.6, then Xenon shall promptly pay to Genentech any resulting amounts overpaid by Genentech pursuant to under this Section 2.6, together with interest calculated in the manner provided in Section 8.15.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

2.7 Conduct of Research Program

(a) Each Party shall use Diligent Efforts to perform its obligations pursuant to the Research Program.

(b) Each Party shall conduct the Research Program in compliance with all Applicable Laws, including, without limitation, GLP where applicable.

(c) Each Party hereby agrees that it shall not employ or otherwise use in any capacity, the services of any person debarred under US law, including but not limited to 12 U.S.C. 335(a) or (b) or 21 U.S.C. 335a, in performing any portion of the Research Program.

(d) Neither Party shall be entitled to utilize the services of Third Parties (including any Affiliates) to perform its Research Program activities except in accordance with Section 3.7 below. Each Party shall remain at all times fully liable for its responsibilities under the Research Program. For the avoidance of doubt, in the event that the JRC determines that certain Xenon Activities (as described in Section 3.7 below) are to be subcontracted to a CRO, [†], provided that such activities are in addition to, and not within, the activities designated to FTE's funded by Genentech pursuant to Section 2.5(a) and on Schedule B.

ARTICLE 3
JOINT RESEARCH

3.1 Alliance Managers.

Within thirty (30) days following the Effective Date, each Party will appoint (and notify the other Party of the identity of) a senior representative having a general understanding of pharmaceutical research, Development and Commercialization issues to act as its alliance manager under this Agreement ("**Alliance Manager**"). The Alliance Managers will serve as the primary business contact point between the Parties for the purpose of providing Xenon with information on the progress of Genentech's research, Development and Commercialization of the Licensed Product(s) and Diagnostic Products and will be primarily responsible for facilitating the flow of information and otherwise promoting communication, coordination and collaboration between the Parties; providing single point communication for seeking consensus both internally within the respective Party's organization and together regarding key global strategy and planning issues, as appropriate, including facilitating review of external corporate communications; and raising cross-Party and/or cross-functional disputes in a timely manner.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

Each Party may replace its Alliance Manager), either with respect to certain matters and/or for all purposes under this Agreement, on written advisory (including via e-mail) to the Alliance Manager of the other Party.

3.2 Joint Research Committee

(a) Within thirty (30) days following the Effective Date, the Parties shall establish a Joint Research Committee (the "**JRC**") which shall have responsibility to oversee the Research Program, and to plan and coordinate the activities under the Research Plan, including:

(i) Reviewing and updating the Research Plan;

(ii) Circulating a copy of each revised or updated Research Plan to each of the Alliance Managers;

(iii) Monitoring progress of the Research Plan including monitoring the Parties' compliance with their respective obligations under same, including the accomplishment of key activities, the devotion of the required number of FTEs;

(iv) Establishing criteria for the selection of prospective Development Candidate(s) to be recommended for submissions by Genentech for LSR-Go decision;

(v) Recommending Compounds to be submitted by Genentech to its management for an LSR-Go decision;

(vi) Recommending Compounds to be submitted by Genentech to its management for an ED-Go decision; and

(vii) Such other activities as set forth in the Research Plan or this Agreement, or as otherwise agreed by the Parties from time to time.

(b) The JRC shall be comprised of an equal number of representatives of each Party with expertise appropriate for the function and purpose of the committee, but in no event will the membership of the JRC exceed three (3) representatives of each Party. Each Party will designate one of its representatives as its Project Leader, and may replace its representatives on the JRC from time to time in its discretion with prior written notice to the other Party.

(c) The Chair of the JRC shall [†]. The Chair will be responsible for providing notice of all meetings to the members of the JRC, assembling and distributing meeting agendas and minutes, leading the meetings and, as needed, appointing a representative of the JRC to act as secretary of each meeting.

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(d) Upon completion of all activities for which the JRC was established, the JRC shall have no further responsibilities or authority under this Agreement and will be considered dissolved by the Parties.

3.3 Governance of JRC

(a) The JRC shall hold an initial in-person meeting within thirty (30) days following the establishment of the JRC, at a location to be agreed by the representatives of the JRC. Thereafter, the JRC shall meet as often as it determines necessary in connection with the Research Program, to be held at such time as may be mutually agreed upon by the Parties, but at least once per Calendar Quarter. Such meetings may be in-person, by audio or by video conference, but unless otherwise agreed by the Parties, the JRC shall meet in-person [†] per Year. The location of in-person meetings shall alternate between the locations of the Parties.

(b) Each Party shall use all reasonable efforts to cause its representatives to attend the meetings, and if a Party's representative is unable to attend a meeting, such Party shall designate an alternate representative to attend in place of the absent representative.

(c) Each Party may, in its discretion, invite additional employees (including its Alliance Manager), and, with the consent of the other Party, consultants or scientific advisors, to attend the meetings of the JRC, PROVIDED, however, that such employees, consultants and advisors are under obligations of confidentiality and non-use applicable to Confidential Information of each Party that are at least as stringent as those set forth in Article 11.

(d) Each Party shall be responsible for all of its own expenses of participating in the JRC, including, without limitation, all costs of travel, food and lodging for a Party's representatives attending an in-person meeting.

(e) Notice of meetings shall be given to all JRC members at least four (4) weeks in advance for in-person meetings and at least two (2) weeks in advance for audio or video teleconferences.

(f) A quorum for a meeting of the JRC shall be two (2) representatives of each Party.

(g) The JRC Chair shall distribute to all members of the JRC, minutes of the meeting within fifteen (15) Business Days following the date of the meeting to allow adequate review and comment. Such minutes shall provide a description in reasonable detail of the discussions held at the meeting and a list of any actions,

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decisions or determinations approved by the JRC. Minutes of each meeting shall be approved or revised as necessary at the next meeting. The approved minutes of each meeting shall be distributed to the representatives of the JRC and to the Alliance Managers by the Chair of the JRC within thirty (30) days of such approval.

3.4 Decision Making

At all times, the representatives of each Party on the JRC shall take into consideration the view of the representatives of the other Party regarding the matters under consideration by the JRC, and the objective of the JRC shall be to reach agreement by consensus on matters after reasonable and open discussion. Each Party, but not each representative of a Party, shall have one vote on all matters coming before the JRC. In the event that the JRC cannot reach agreement on a matter by consensus the matter [†].

3.5 Responsibilities

Notwithstanding anything to the contrary in this Article 3, each Party shall have and retain the rights, powers and discretion granted to it under this Agreement and the JRC shall not be vested with any right, power or discretion except as expressly provided in this Agreement and shall not have the power to amend or modify this Agreement, which may only be amended or modified as provided in Section 16.14.

3.6 Research Plan

(a) As soon as practicable after the establishment of the JRC, the representatives of the JRC shall prepare a detailed Research Plan based on the initial Research Plan as set out in Schedule B. The initial detailed Research Plan will be consistent with the initial Research Plan, and will contain:

(i) A general overview and timetable for each Party's planned research activities under the Research Program for the next twelve (12) months;

(ii) Specific research activities, including activities pertaining to:

- research and Development of Compounds (including activities in furtherance of preparation for submissions by Genentech for LSR Go and/or ED-Go decisions)
- Criteria for the selection of prospective Development Candidate(s)
- Submission of Compounds for LSR Go decisions
- Submission of Compounds for ED-Go decisions

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(iii) The number of FTEs to be provided by Xenon, subject to Section 2.5 ;

(iv) Provisions to deal with Manufacturing of Compounds by Xenon for research activities;

(v) An allocation of responsibilities of each of the Parties for the research activities pursuant to the Research Program.

3.7 Subcontractors

(a) By Xenon. Xenon shall not subcontract or outsource any work or any of its activities under the Research Plan, except as set forth in this Section 3.7(a) below:

(i) Xenon may subcontract to a Third Party contract research organization ("**CRO**"), such activities as are set-out under the Research Plan and/or as may otherwise be specifically approved in advance by the JRC ("**Xenon Activities**"), provided that such CRO has entered into a written agreement with Xenon that includes terms and conditions corresponding to those in Section 3.7(b), as such terms would apply to Xenon and further provided that such CRO's shall not be considered FTE's under the Research Plan and shall not be funded with FTE payments made by Genentech; and

(ii) Xenon may fulfill its obligation to commit FTEs to the Research Program with the prior written consent of Genentech by using individual Third Party contractors or consultants under the following conditions: (A) [†]; (B) [†]; (C) [†]; (D) each such individual must have entered into a written agreement with Xenon that includes terms and conditions protecting and limiting use and disclosure of Confidential Information and Know-How at least to the same extent as under this Agreement, and requiring all such individuals to assign to Xenon all right, title and interest in and to any Intellectual Property (and intellectual property rights) created or discovered in connection with performance of the Xenon Activities. Xenon is responsible for compliance by such Third Party FTEs with the terms and conditions of this Agreement as if those Third Party FTEs were Xenon employees.

(b) By Genentech. Genentech may not subcontract or outsource any of its activities under a Research Plan and/or any of its other research or Development activities during the Research Term that relate to SMC Licensed Products ("**Genentech Activities**"), except as set forth in this Section 3.7(b). Genentech may subcontract Genentech Activities to a Third Party contract research organization ("**CRO**"), provided that any such CRO must have entered into a written agreement with Genentech that includes terms and conditions protecting and limiting use and disclosure of Confidential Information and Know-How at least to the same extent as under this Agreement, [†]. Genentech is responsible for compliance by such CRO with the applicable terms and conditions of this Agreement.

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3.8 [†]

(a) [†]:

(i) [†]; or

(ii) [†].

[†].

3.9 [†] Project

For the purposes Section 3.8 and this Section 3.9:

[†]:
(i) [†];
(ii) [†]; and
(iii) [†].

[†].

3.10 [†]

At any time during the first year following the Effective Date, [†].

ARTICLE 4
DISCLOSURE AND REPORTS DURING THE RESEARCH TERM

4.1 Initial Technology Transfer

Commencing as soon as reasonably practicable following the Effective Date, (a) Xenon will disclose and transfer all Xenon Background Know-How to Genentech that Xenon believes in good faith is necessary or useful for the exploitation of the rights granted to Genentech hereunder or which is otherwise expressly requested by Genentech; and (b) Genentech will disclose Genentech Background Know-How to Xenon, to the extent that Genentech, in good faith believes it is necessary or useful for the work to be undertaken pursuant to the Research Program.

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4.2 Quarterly Reports

Each Calendar Quarter during the Research Term, at or prior to the annual in-person JRC meeting referenced in Section 3.3(a), each Party shall provide to the other a written progress report which shall describe, in reasonable detail, the work performed to date on the Research Program, evaluate the work performed in relation to the objectives of the Research Program, and provide such other information required by the Research Program or reasonably requested by the JRC.

4.3 Annual Report

Until the expiration of the Research Term, on the annual anniversary of the Effective Date (and at the expiration of the Research Term), each Party shall prepare and deliver to the other: (i) an annual report, written in reasonable detail, of material activities performed under the Research Program the previous year, and (ii) (except for the report at the end of the Research Program) plans, written in reasonable detail, for activities to be undertaken in accordance with the Research Plan under the Research Program in the subsequent year.

4.4 Books and Records

Each Party shall maintain Books and Records in connection with its activities pursuant to the Research Program, as well as any other books and records as may be required from time to time by Applicable Law or this Agreement. Such Books and Records will be maintained in accordance with a Party's internal program of recordkeeping and record retention.

4.5 Material Transfers

In connection with the Research Program, each of the Parties may from time to time provide to the other Party materials owned by or licensed to the delivering Party (such materials, "**Substances**"). Except as otherwise provided under this Agreement, (a) Xenon may use any Substances provided by Genentech solely in the conduct of its activities under the Research Plan and (b) Genentech may use such Substances solely in furtherance of the rights and license granted to Genentech in Section 9.1. As among the Parties, all such Substances delivered shall remain the sole property of the delivering Party. Except for the provision to subcontractors as permitted under Section 3.7 and as otherwise authorized under this Agreement, including this Section 4.5, such Substances shall not be used by, delivered to or used for the benefit of, any Third Party without the prior written consent of the delivering Party, and shall not used in research or testing of human subjects unless otherwise specified in the Research Program. Because not all of their characteristics may be known, the Substances supplied under this Section 4.5 must be used with prudence and appropriate caution in any experimental work. THE SUBSTANCES ARE PROVIDED "**AS IS**" AND WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE.

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ARTICLE 5
MANUFACTURE AND SUPPLY

5.1 Manufacturing and Supply of Compounds

(a) Research Program Quantities. Unless otherwise agreed in writing by the Parties, the Research Program shall provide for the Parties to manufacture and supply their own research scale compounds and Compounds (such research scale batch sizes made by Xenon not to exceed 10gms per batch unless otherwise mutually agreed by the Parties), and each Party shall bear their own cost of Manufacturing same.

(b) Development and Commercial Manufacturing. Except for those research quantities set forth in Section 5.1 (a), as between the Parties, Genentech (and, if applicable, Genentech Sublicensees or Genentech Licensees) has the sole right and responsibility for, and control over, all Manufacturing of Collaboration Compounds and Licensed Products.

ARTICLE 6
DEVELOPMENT AND COMMERCIALIZATION

6.1 Development and Commercialization Activities

Except for the activities assigned to Xenon under the Research Plan, as between the Parties, Genentech shall have the sole right and responsibility for, and control over, all research, Development and Commercialization of Collaboration Compounds, Licensed Products and Diagnostic Products in the Territory, at its sole cost. Genentech shall devote Diligent Efforts to the research, Development and Commercialization of Collaboration Compounds and Licensed Products, such Diligent Efforts which will specifically include the dedication of Diligent Efforts towards the Development and Commercialization of at least one (1) Licensed Product that contains a Collaboration Compound.

6.2 Development Candidates

Genentech, through its Research Review Committee (or any equivalent successor governance body), in its sole discretion, shall select Compounds, and the Indication(s) for those Compounds, to advance into Development.

6.3 Genentech Post Research Term Reports

Genentech shall submit to Xenon, within thirty (30) days following the expiration of each period of [†] following the expiration of the Research Term, a written report summarizing Genentech's efforts, and progress made, with respect to the research, Development and Commercialization of Development Candidates, Collaboration Compounds, Licensed Products (for which Xenon is eligible for or is due Milestone Payments or Royalties under this Agreement) and Diagnostic Products, such report(s) which will include:

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(a) a high-level summary of all material research, Development and Commercial activities that it has performed during such [†] period (including Milestone Events);

(b) disclosure of any Licensed Product conceived, identified or first made [†], provided that such requirement shall be deemed satisfied if Genentech provides either (i) copy(ies) of patent applications that claim or otherwise describe such Licensed Products or Compound(s) contained in such Licensed Products, or (ii) notice that no such patent applications were filed during the applicable [†] month period;

(c) in the event that Genentech has Ceased Development, disclosure of [†] and[†]; and

(d) [†].

[†].

ARTICLE 7
CLOSING PAYMENT AND MILESTONE PAYMENTS

7.1 Closing Payment

Within ten (10) Business Days following the Effective Date, Genentech shall pay to Xenon the sum of Ten Million Dollars ($10,000,000).

7.2 Research and Development Milestone Events and Payments

On the first occasion that any SMC Milestone Product achieves any of the following events and on the first occasion that any LMC Milestone Product achieves any of the following events (each, an "**R&D Milestone Event**") Genentech shall pay to Xenon, at the time set out in Section 7.7(a), the applicable amount set opposite such event in the applicable column within the table below:

R&D Milestone Event	Payment Amount for SMC Milestone Product	Payment Amount for LMC Milestone Product
ED-Go	$ 5,000,000	[†]

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[†]	[†]	[†]
[†]	[†]	[†]
[†]	[†]	[†]

For clarity, the maximum amount payable to Xenon under this Section 7.2 and Section 7.6 for achievement of all R&D Milestone Events is fifty-eight million five hundred thousand dollars ($58.5M).

[†].

7.3 Regulatory Milestone Events and Payments

On the first [†] occasions that any distinct SMC Milestone Product and on the first [†] occasions that any distinct LMC Milestone Product achieves any of the following events (each, a "**Regulatory Milestone Event**") Genentech shall pay to Xenon, subject to Section 7.6, at the time set out in Section 7.7(a), the applicable amount set opposite such event in the applicable column within the table below:

Regulatory Milestone Event	Payment Amount for SMC Milestone Product	Payment Amount for LMC Milestone Product
[†]	$ [†]	$ [†]
[†]	$ [†]	$ [†]
[†]	$ [†]	$ [†]
[†]	$ [†]	$ [†]
[†]	$ [†]	$ [†]

For clarity, (i) [†], and (ii) the maximum amount payable to Xenon under this Section 7.3 and Section 7.6 for achievement of all Regulatory Milestone Events is three hundred thirteen million dollars ($313M).

[†].

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

7.4 Sales Milestone Events and Payments

Upon achievement of each of the following events (each, a "**Sales Milestone Event**") by the first [†] distinct SMC Milestone Products and by the first [†] distinct LMC Milestone Products, Genentech shall pay to Xenon, subject to Section 7.6, at the time set out in Section 7.7(b), the applicable amount set opposite such event in the applicable column within the table below:

Sales Milestone Event	Payment Amount for SMC Milestone Product	Payment Amount for LMC Milestone Product
[†]	$ [†]	$ [†]
[†]	$ [†]	$ [†]

For clarity, (i) [†] (ii) [†]; (iii) the maximum amount payable to Xenon under this Section 7.4 and Section 7.6 for achievement of all Sales Milestone Events is one hundred eighty million dollars ($180M).

[†]

7.5 Second Indication Milestone Events and Payments

[†], Genentech shall pay to Xenon, subject to Section 7.6, the amount set opposite such event in the applicable column within the table below, whether the Second Indication Milestone Event is achieved by Genentech or any Sublicensee or Genentech Licensee (as applicable):

Second Indication Milestone Event	Payment Amount for SMC Milestone Product	Payment Amount for LMC Milestone Product
[†]	$ [†]	$ [†]
[†]	$ [†]	$ [†]

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

For clarity, the maximum amount payable to Xenon under this Section 7.5 and Section 7.6 for achievement of all Second Indication Milestone Events is seventy-four million five hundred thousand dollars ($74.5M).

[†]

7.6 Post-Research Term Know-How Milestone Payments

[†]

[†]	**Percentage (%) of Milestone Payments set out in the foregoing Sections of this** Article 7
[†]	[†]
[†]	[†]
[†]	[†]
[†]	[†]

[†] For further clarity:

(i) [†]; and

(ii) [†]

7.7 Time of Payment

(a) The amounts set out in Sections 7.2, 7.3, 7.5 and 7.6 shall be paid within [†] Business Days following achievement of the respective Milestone Event.

(b) The amounts set out in Section 7.4 in respect of each Sales Milestone Event shall be paid within [†]days following the end of the fiscal quarter of Genentech in which the Sales Milestone Event is achieved.

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7.8 Milestone Achievements

The Milestone Payments are payable by Genentech to Xenon regardless of whether the respective Milestone Event is achieved by Genentech or a Sublicensee or Genentech Licensee (as applicable).

ARTICLE 8
ROYALTIES

8.1 SMC Royalty

Genentech shall pay to Xenon a royalty (the "**SMC Royalty**") on [†], at the percentage rate set out as follows:

Aggregate Net Sales of each SMC Royalty Product (US $Million)	Royalty
[†]	[†]%
[†]	[†]%
[†]	[†]%

[†]

8.2 SMC Know-How Royalty

Genentech shall pay Xenon a royalty (the "**SMC Know-How Royalty**"), on [†], of [†] ([†]%) percent of Net Sales of SMC Know-How Royalty Products, for [†].

8.3 LMC Royalty

Genentech shall pay to Xenon a royalty (the "**LMC Royalty**") on [†], of [†] percent ([†]%) of Net Sales [†].

8.4 Post-Research Term Know-How Royalties

[†], Genentech shall pay to Xenon a royalty of annual Net Sales as set forth herein below.

(a) For [†]:

[†]	SMC Licensed Product Royalty	
[†]	Annual Net Sales	Royalty
	Up to and including [†]($[†])	[†] percent ([†]%)
	[†] ($[†]) but not exceeding [†] ($[†])	[†] percent ([†]%)
	[†] ($[†])	[†] percent ([†]%)
[†]	[†] percent ([†]%)	

(b) [†]; and

(c) [†].

8.5 Generic Products

[†].

8.6 Biosimilar Products

[†].

8.7 Limits on Royalty Reductions

[†].

8.8 Royalty Stacking Offsets

[†].

8.9 Diagnostic Products

For all Diagnostic Products to which [†], Genentech shall pay to Xenon a royalty of [†] Percent ([†]%) of [†] and, for all Diagnostic Products to which [†], Genentech shall pay to Xenon a royalty of [†] Percent ([†]%) of [†] (each, a "**Diagnostic Product Royalty**"). Each such Diagnostic Product Royalty shall be paid [†].

8.10 Non-Monetary Consideration

In the event that Genentech or any of its Sublicensees or Genentech Licensee (as applicable), receives any non-monetary consideration in connection with the sale or other disposition for value of Licensed Products under which Royalty Payments or Milestone Payments are applicable hereunder, including barter or counter-trade, [†], the matter shall be resolved pursuant to the terms set forth in Article 13.

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8.11 Royalty Reports; Payments

(a) Within [†] days after the end of each Calendar Quarter in which a Royalty is payable hereunder to Xenon, Genentech shall submit to Xenon a report on the basis of each Royalty Product [†]:

(i) [†];

(ii) [†]; and

(iii) [†].

(b) Concurrently with such report, Genentech shall pay to Xenon all Royalty Payments payable by it under this Article 8 as indicated in the report.

8.12 Audits

Genentech shall keep (and shall cause each of and Sublicensees to keep and make available to Xenon pursuant to this Section 8.12) complete and accurate records of the underlying data relating to the reports and payments required by this Article 8 for a period of not less than [†] after each Calendar Quarter concerned. Xenon shall have the right from time to time (but not more often than once in each Year and only once with respect to records covering any specific period of time) at its own expense to have an independent, certified public accountant, selected by it and reasonably acceptable to Genentech, review any such records in the location(s) where such records are maintained upon reasonable notice and during regular business hours and under obligations of strict confidence, for the sole purpose of verifying the basis and accuracy of payments made under this Article 8. If the review of such records reveals that Genentech has failed to accurately report information pursuant to Section 8.11, then Genentech shall promptly pay to Xenon any resulting amounts due under Section 8.11, together with interest calculated in the manner provided in Section 8.14. If any amounts due under Section 8.11 as a result of such audit are greater than [†] percent ([†]%) of the amounts actually due for a calendar year, Genentech shall pay the reasonable costs of such review, provided that a correction has not already been made subsequent to the audit period and prior to the commencement of the audit. If Genentech in good faith disputes any conclusion of the accounting firm under this Section 8.12, including that Genentech owes additional amounts, then Genentech shall inform Xenon by written notice within thirty (30) days of receipt of a copy of the audit in question, specifying in detail such dispute. The Parties shall promptly thereafter meet and negotiate in good faith a resolution to such dispute. In the event that the Parties are unable to resolve such dispute within sixty (60) days after notice by Genentech, the matter shall be resolved pursuant to the terms set forth in Article 13, and interest shall be payable on any disputed amounts determined to be due in the same manner as provided for in Section 8.14.

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8.13 Tax Matters

Any withholding or other taxes which a paying Party is required by law to pay or withhold on behalf of a receiving Party with respect to royalties or other payments payable to a receiving Party under this Agreement shall be deducted from the amount of such royalties or other payments due, and promptly paid or remitted as appropriate, by the paying Party on behalf of the receiving Party. Any such tax required by law to be paid or withheld shall be an expense of, and borne solely by, the receiving Party. The paying Party shall furnish the receiving Party with the best available evidence of such payment or amount withheld as soon as practicable after such payment is made or such amount is withheld. The receiving Party shall furnish the paying Party with appropriate documents supporting application of the most favourable rate of withholding or other tax available under applicable laws and/or tax treaties. The Parties will each, respectively, devote all reasonable efforts to ensuring that all such taxes are paid or remitted, as appropriate, at the most favourable rate(s) proposed by the receiving Party. The Parties will reasonably co-operate in completing and filing documents required under the provisions of any applicable tax laws or any other Applicable Law in connection with the making of any required tax payment or withholding payment, in connection with a claim of exemption from, or entitlement to, a reduced rate of withholding or in connection with any claim to a refund of or credit for any such payment.

8.14 Currency Exchange

All Net Sales and amounts due to Xenon hereunder shall be expressed and paid in US dollars. Net Sales outside of the United States shall be first determined in the currency in which they are earned and shall then be converted into Swiss Francs and then into the U.S. dollars using Genentech's then current standard practices actually used on a consistent basis in preparing its audited financial statements [†].

All payments shall be made in U.S. dollars in immediately available funds.

8.15 Late Payments

Genentech shall pay interest to Xenon on the aggregate amount of any payments that are not paid on or before the date such payments are due under this Agreement at a rate per annum equal to the lesser of the [†] rate as reported by Reuters Ltd. (or other reputable Third Party source as reasonably selected by Xenon), or the highest rate permitted by applicable law, compounded annually, and calculated on the number of days such payments are paid after the date such payments are due.

8.16 Mode of Payment

Unless otherwise agreed by Xenon, all payments required to be made to Xenon under this Agreement shall be made via wire transfer to an account designated in writing in advance by Xenon.

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8.17 No Set-Off

All payments required to be made by each Party to the other pursuant to this Agreement are non-refundable and shall be made without any set-off or deduction except as expressly provided herein.

8.18 Bank Account

All payments hereunder shall be made in United States dollars by bank wire transfer in immediately available funds to the account listed below (or such other account as Xenon shall designate before such payment is due):

Bank:
Royal Bank of Canada

Bank Address:
Main Branch – Royal Center
1025 W. Georgia Street
Vancouver BC V5E 3N9 Canada
[†]
[†]

8.19 Costs

Except as otherwise provided in this Agreement, each Party shall bear its own costs of performing its obligations under this Agreement PROVIDED that in the event that Xenon is required to incur out-of-pocket costs in connection with providing to Genentech any assistance that is from time to time requested by Genentech from Xenon pursuant to the terms of this Agreement in connection with the research, Development and Commercialization of Products in the Territory, Xenon's obligation to provide such assistance shall be subject to Xenon and Genentech first agreeing in writing on the amount of such out-of-pocket costs, [†].

8.20 Sublicensees

The Royalty Payments are payable by Genentech to Xenon regardless of whether the respective Net Sales are achieved by Genentech or a Sublicensee or Genentech Licensee.

8.21 Post-Royalty Term

[†].

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

ARTICLE 9
LICENSES

9.1 Xenon Licenses to Genentech

Xenon hereby grants to Genentech:

(i) under the Licensed IP, an exclusive license, within the Territory, to make, use, sell, offer for sale and import Collaboration Compounds and Licensed Products for all uses; and

(ii) under the Licensed IP, a non-exclusive license, within the Territory, to make, use, sell, offer for sale and import Diagnostic Products for all uses.

Notwithstanding subsection (i) above, with respect to the Xenon Background Patent Rights Covered by the [†]Patent (as defined below) , Xenon hereby grants to Genentech, a non-exclusive license, within the Territory, to make, use, sell, offer for sale and import Collaboration Compounds and Licensed Products. "[†]Patent" means the US patent #[†] that is identified as Entry #3 in Section IV of Schedule C attached , and any other Patent Rights filed in the Territory based upon or claiming priority from the aforementioned US patent, solely to the extent that such Patent Rights relate to [†].

Notwithstanding anything to the contrary in this Section 9.1, but subject to Section 3.7 above, Xenon retains all rights to use Post-Research Term IP, to the extent necessary or useful to make, use, sell, offer for sale and import (i) Compounds that are conceived, identified, first made or acquired by Xenon after the Research Term without the use of Xenon Background IP or Collaboration IP, and/or (ii) Products that contain such Compounds.

9.2 Genentech License to Xenon

Genentech hereby grants to Xenon, under the Licensed IP (to the extent exclusively licensed to Genentech pursuant to Section 9.1 above) and the Genentech Background IP and Genentech Collaboration IP, a royalty free, non-exclusive, license to conduct research pursuant to the Research Program during the Research Term. Such license shall not be sublicensable or transferable, other than the grant of a sublicense to those Persons as contemplated by and in accordance with Section 3.7(a) above.

9.3 Sublicense Rights

Genentech may grant to a Third Party ("**Genentech Licensee**") rights to make, use, sell, offer for sale and/or import [†] and/or Licensed Products containing Compounds Covered by the Genentech Collaboration IP ("**Genentech License**") and sublicenses of its licensed rights under Section 9.1 without the prior consent of Xenon, PROVIDED that:

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(a) In each such Genentech License or sublicense, the Genentech Licensee or Sublicensee shall agree in writing to be subject to, and bound by, by terms and conditions substantially similar to the corresponding terms and conditions of this Agreement;

(b) promptly after execution of the Genentech License or sublicense, Genentech shall provide to Xenon a reasonably detailed summary of such Genentech License or sublicense, and such further information respecting same as Xenon may reasonably request and that directly relates to the licenses granted to Genentech under this Agreement or Genentech's payment obligations to Xenon under this Agreement. Such sublicense shall be treated as Genentech Confidential Information hereunder;

(c) Genentech shall remain responsible for the performance of this Agreement and the performance of its Sublicensees or Genentech Licensee hereunder, including the payment of all payments due, and making reports and keeping books and records; and

(d) Any act or omission by a Genentech Licensee or Sublicensee that would be a material breach of this Agreement had it been performed (or not performed) by Genentech shall be treated as a material breach of this Agreement by Genentech, provided, however, that Xenon shall not have the right to terminate this Agreement pursuant to Section 12.3(a)(i) based upon such material breach if:

(i) [†];

(ii) [†]; and

(iii) [†].

In the event that Genentech licenses to a Third Party any rights to Develop or Commercialize Licensed Products where such license does not require a Sublicense under the Licensed IP but where Xenon is entitled to Milestone Payments or Royalties therefore, such license agreement shall include terms and conditions that are substantially similar to the terms and conditions of this Agreement respecting Xenon's rights to payment under this Agreement.

9.4 Sublicense Up-front Payments

In the event that Genentech grants a Sublicense to a Third Party other than an Affiliate under any Licensed IP [†].

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9.5 No Implied Licenses

Nothing in this Agreement shall be construed to grant to either Party any rights or license to any Intellectual Property of the other Party other than the licenses expressly set forth in this Agreement.

ARTICLE 10
INTELLECTUAL PROPERTY OWNERSHIP, PROTECTION AND ENFORCEMENT

10.1 Ownership of Intellectual Property

(a) Inventorship and ownership of Collaboration IP shall be determined in accordance with applicable laws relating to inventorship set forth in the patent laws of the United States (Title 35, United States Code).

(b) Subject to the terms and conditions set forth in this Agreement:

(i) all Genentech Background IP and Genentech Collaboration IP will be owned solely by Genentech;

(ii) all Xenon Background IP and Xenon Collaboration IP will be owned solely by Xenon;

(iii) all Post-Research Term IP will be owned solely by Xenon; and

(iv) all Joint Collaboration IP will be jointly owned by Genentech and Xenon.

(c) Subject to the licenses granted by one Party to the other and/or as otherwise specifically provided under this Agreement, each Party retains full ownership rights (including as provided under 35 U.S.C. Section 262) in and to such Intellectual Property described in Section 10.1(b) above, for any field, and including the right to license and sublicense, and to freely exploit, transfer or encumber its ownership interest without the consent of, or payment or account to the other Party. Each Party hereby waives any right it may have under the laws of any jurisdiction to request such payment, accounting or consent with respect to such Intellectual Property.

(d) Each Party shall require all of its employees, and (in accordance with Section 3.7, any CROs, CRO personnel, individual contractors or consultants), agents, and any other Third Parties working on its behalf (and their respective employees, contractors and agents) to assign to Xenon all Xenon Collaboration IP, to assign to Genentech all Genentech Collaboration IP, and to assign to Genentech and Xenon jointly all Joint Collaboration IP.

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(e) The Parties shall cooperate with each other to effectuate ownership of any such Intellectual Property rights as set forth in this Agreement, including, but not limited to, executing and recording documents associated herewith.

10.2 Disclosure of Collaboration IP.

Each Party shall promptly disclose to the other Party any Collaboration IP. All such Collaboration IP shall be treated as Confidential Information for the purpose of Article 11.

10.3 Prosecution of Genentech Background IP and Genentech LMC Collaboration IP.

Genentech shall have the sole right, in its discretion, to prosecute and maintain all Patent Rights in Genentech Background IP, and in Genentech Collaboration IP relating specifically to LMC Licensed Products in the Territory, with patent counsel of its choice, and to proceed with Prosecution (as defined in Section 10.4(a) below) of such Patent Rights. Genentech shall bear the cost of such prosecution and maintenance.

10.4 Prosecution of other Collaboration IP and Xenon Background IP

During the Term, Genentech and Xenon shall select a mutually agreed upon outside counsel ("**Outside Patent Counsel**") to represent Genentech in accordance with the terms set out below and to Prosecute all Patent Rights within the Collaboration IP other than and expressly excluding Genentech Collaboration IP relating specifically to LMC Licensed Products (collectively "Other Collaboration IP") and Xenon Background IP (except Xenon's Patent Rights Covering [†] and/or Covering the research tools described in Section 10.5 below) on the following terms:

(a)

(i) **"Prosecution," "Prosecute,"** and the like mean with regard to a particular Patent Right as the preparation, filing, prosecution and maintenance, including any re-issues or re-examinations, interferences, opposition proceedings, revocation actions or the like, with respect such Patent Right;

(ii) As between the Parties, Genentech shall be primarily responsible for Prosecution of Patent Rights within Other Collaboration IP and Xenon Background IP and for instructing Outside Patent Counsel with respect to such Prosecution. The Outside Patent Counsel shall be instructed to conduct such Prosecution in a manner consistent with the Parties' mutual goal of Prosecuting all Patent Rights within Other Collaboration IP and Xenon Background IP that have commercial value, and consistent with Genentech's customary practices when Prosecuting its own Patent Rights;

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(iii) Filing of Applications. Should a Party wish to file a patent application covering any Other Collaboration IP or Xenon Background IP, it shall inform the other Party. With respect to any such patent application, Genentech shall engage Outside Patent Counsel to Prosecute such patent application and shall instruct such Outside Patent Counsel to provide to each Party a copy of any such patent application for review and comment by the Parties and such Outside Patent Counsel shall be instructed to reasonably consider the comments of all Parties with respect hereto;

(iv) Review and Comment. The Outside Patent Counsel shall also be instructed to (a) keep the Parties informed as to the Prosecution of all Patent Rights relating to Other Collaboration IP and Xenon Background IP (including those matters involving which countries to initiate or continue prosecution (including validation) of all such Patent Rights, the question of scope of, the issuance of, the rejection of, and interference involving, or an opposition to any such Patent Rights), such that the Parties each have sufficient time to review and comment upon any documents intended for submission to any patent office; (b) promptly furnish to each Party a copy of any documents relevant to such Prosecution, including copies of correspondence with or from any patent office, foreign associates, and outside counsel; and (c) reasonably consider the comments/instructions of all Parties provided to Outside Patent Counsel respecting such Prosecution, subject to Section 10.4(a)(vii);

(v) Cooperation. Generally, the Parties shall cooperate and with and assist each other in the Prosecution of a Patent Right within Other Collaboration IP and Xenon Background IP, including (a) consulting with the other Party after receiving any substantial action or development in the prosecution of any such Patent Rights. (b) making scientists and scientific records reasonably available, and (c) making each Party's employees, agents, and consultants reasonably available to the other Party (or to its authorized attorneys, agents representatives, or Outside Patent Counsel), to the extent reasonably necessary to enable matters related to the Prosecution of a Patent Right within Other Collaboration IP and Xenon Background IP;

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(vi) Except as provided in Section 10.4(b), Genentech shall bear the cost of all matters pertaining to Prosecution of Patent Rights within Other Collaboration IP and Xenon Background IP;

(vii) If Xenon and Genentech cannot reach agreement on a decision relating to the Prosecution of Patent Rights Covering within such Other Collaboration IP and Xenon Background IP (except Xenon's Patent Rights Covering [†]), then Genentech shall have final authority to make such decision, provided that, such decision shall at all times be consistent with Genentech's customary practices when Prosecuting its own Patent Rights;

(viii) The Parties shall cooperate in obtaining patent term restoration, supplemental protection certificates or their equivalents, and patent term extensions with respect to Patent Rights within the Other Collaboration IP and Xenon Background IP in any country and/or region where applicable; and

(ix) Reports. On an annual basis throughout the Term, within thirty (30) days following a written request by Xenon, Genentech shall deliver a report to Xenon, in a form and containing information substantially similar to that contained in Schedule C attached hereto, that provides an update and of all Patent Rights within Collaboration IP (including Genentech Collaboration IP) and Xenon Background IP that are then in the course of Prosecution.

(b) Abandonment of Prosecution by Genentech. Genentech shall give to Xenon notice in writing of any determination by Genentech, pursuant to its right to make such determination in Section 10.4(a)(vii), that it shall cease Prosecution of a Patent Right within the Xenon Background IP or Other Collaboration IP anywhere in the Territory. Such notice shall be given sixty (60) days prior to the lapse or abandonment deadline or date imposed by Applicable Law in any country where such Patent Right is being Prosecuted. Upon receipt of such a notice from Genentech, Xenon shall have the right, exercisable by notice in writing to Genentech within sixty (60) days of receipt of such notice, to assume responsibility, at Xenon's cost, for the Prosecution of such Patent Rights (the "**Xenon Prosecution Notice**"). Upon receipt of such Xenon Prosecution Notice, Genentech shall cooperate with and assist with the Prosecution of such Patent Right as is reasonably required. With respect to any such Patent Right for which Xenon assumes responsibility for Prosecution under such Xenon Prosecution Notice, Xenon, at its sole discretion, shall advise Genentech (i) if such Patent Right shall continue to constitute Xenon Background IP or Other Collaboration IP, as the case may be, for all purposes of this Agreement or (ii) if, effective as of the date of the Xenon Prosecution Notice, such Patent Right shall be excluded from the license granted to Genentech under

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Article 9 hereunder, in which case Genentech shall assign its interest in any such Patent Right to Xenon, and Article 9 and all other related provisions of this Agreement shall be deemed to be amended, without further action by either Party.

10.5 Prosecution and Maintenance of Xenon's Background IP Patent Rights Covering [†] and Research Tools

(a) Xenon shall have the sole right in its discretion, to Prosecute all Patents Rights in Xenon Background IP Covering [†] (such Patent Rights which are identified in Schedule C, Section II entitled "Diagnostics of [†] variants") in the Territory, with patent counsel of its choice, and to proceed with Prosecution of such Patent Rights. Similarly, Xenon shall have the sole right in its discretion to Prosecute all Patent Rights in Xenon Background IP Covering certain research tools, in the Territory, with patent counsel of its choice, and to proceed with Prosecution of such Patent Rights. The Patent Rights Covering research tools referenced above are set out in Schedule C, and identified in the following Sections of Schedule C:

- Section III entitled "Screening for Nav1.7 selective compounds",
- Section IV entitled "Sodium channel counterscreens", and
- Section V entitled "[†]".

In exercising the foregoing right to Prosecute the Patent Rights listed in Sections II- IV (but not Section V), Xenon will (a) keep Genentech informed as to the Prosecution of such Patent Rights (including those matters involving which countries to initiate or continue prosecution (including validation) of all such Patent Rights, the question of scope of, the issuance of, the rejection of, and interference involving, or an opposition to any such Patent Rights), such that Genentech have sufficient time to review and comment upon any documents intended for submission to any patent office; (b) promptly furnish to Genentech a copy of any documents relevant to such Prosecution, including copies of correspondence with or from any patent office, foreign associates, and outside counsel; and (c) reasonably consider the comments of Genentech provided to Xenon respecting such Prosecution. Except as otherwise set forth in Subsection 10.5(b) below, Xenon shall bear the cost of Prosecution of the Patent Rights referenced in this Subsection 10.5(a) above; and

(b) Abandonment of Prosecution by Xenon. Xenon shall give to Genentech notice in writing of any determination by Xenon, pursuant to its right to make such determination in Section 10.5(a), that it shall cease Prosecution of a Patent Right within such Xenon Background IP anywhere in the Territory. Such notice shall be given sixty (60) days prior to the lapse or abandonment deadline or date imposed by Applicable Law in any country where such Patent Right is being Prosecuted. Upon receipt of such a notice from Xenon, Genentech shall have the right, exercisable by notice in writing to Xenon within sixty (60) days of receipt

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of such notice, to assume responsibility, at Genentech's cost, for the Prosecution of such Patent Rights (the "**Genentech Prosecution Notice**"). Upon receipt of such Genentech Prosecution Notice, Xenon shall cooperate with and assist with the Prosecution of such Patent Right as is reasonably required.

10.6 Patent Enforcement

(a) Each Party will promptly report to the other Party during the Term any known or suspected infringement by a Third Party of any of the Collaboration IP, Xenon Background IP or Post-Research Term IP in the Territory of which such Party becomes aware, including any declaratory judgment, or similar action alleging the invalidity, unenforceability or non-infringement (provided an opposition or other similar post grant proceeding shall be considered part of Prosecution and governed in accordance with Section 10.4) of any of the Patent Right within the Collaboration IP, Xenon Background IP or Post Research Term IP (collectively **"Infringement"**).

(b) Genentech shall have, in its sole discretion, the first right, but not the obligation, to bring and control any legal action or take other appropriate action in connection with such Infringement in the Territory as it reasonably determines appropriate to prevent or abate actual or threatened infringement.

(c) If Genentech fails to initiate a suit or take other appropriate action that it has the initial right to initiate or take pursuant to Section 10.6(b) within one hundred twenty (120) days after becoming aware of the basis for such suit or action, then Xenon may, in its discretion, provide Genentech with written notice of Xenon's intent to initiate a suit or take other appropriate action. If Xenon provides such notice and Genentech fails to initiate a suit or take such other appropriate action within thirty (30) days after receipt of such notice from Xenon, then, upon approval by Genentech, which approval shall not be unreasonably withheld, Xenon shall have the right to initiate a suit or take other appropriate action that it believes is reasonably required to prevent or abate actual or threatened Infringement or misappropriation of a Patent Right within the Collaboration IP, Xenon Background IP, or Post-Research Term IP (as applicable).

(d) The Party initiating suit shall have the sole and exclusive right to select counsel for any suit initiated by it pursuant to Section 10.6(b) or 10.6(c). If required under law, or otherwise necessary, in order for the initiating Party to initiate or maintain such suit, the other Party shall join as a party to the suit and shall have the right to be represented by counsel of its own choice. The other Party shall offer reasonable assistance to the initiating Party in connection therewith at no charge to the initiating Party except for reimbursement of reasonable out-of-pocket costs incurred in rendering such assistance, except that, if Xenon initiates a suit in accordance with Section 10.6(c), Xenon shall have no obligation to reimburse

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Genentech for any out-of-pocket costs that Genentech incurs in rendering such assistance. The initiating Party shall assume and pay all of its own out-of-pocket costs incurred in connection with any litigation or proceedings initiated by it pursuant to Section 10.6(b) or 10.6(c), including the fees and expenses of the counsel selected by it.

(e) The Party controlling any such action described in Section 10.6(b) or 10.6(c) may not settle or consent to an adverse judgment, including any judgment which affects the scope, validity or enforcement of any Patent Right within the Collaboration IP, Xenon Background IP or Post Research-Term IP, without the express written consent of the non-controlling Party (such consent not to be unreasonably withheld or delayed), except that Genentech or Xenon may each settle or consent to an adverse judgment in any action described in Section 10.6(b) or 10.6(c) without obtaining consent from the other Party unless any such settlement or consent judgment would either (A) impose a financial obligation upon the other Party or (B) admit liability on behalf of the other Party, or (C), limit the scope of or invalidate any Patent Right within the Collaboration IP, Xenon Background IP or Post-Research Term IP.

(f) With respect to any suit or action referred to in Section 10.6(b) or 10.6(c), any recovery obtained as a result of any such proceeding, by settlement or otherwise, shall be applied, in the following order of priority: (i) [†]; (ii) [†]; and (iii) [†].

10.7 Third Party Suits.

(a) Against Genentech. In the event that a Third Party shall make any claim or bring any suit or other proceeding against Genentech, or any of its, Sublicensees, Genentech Licensee or customers, for infringement or misappropriation of any Intellectual Property rights with respect to the research, development, making, using selling, offering for sale, import or export of any Collaboration Product or Licensed Product respecting which Milestone Payments or Royalties are payable to Xenon under this Agreement, Genentech shall have the right to defend and control the defense of such claim, suit or other proceeding as well as to initiate and control any counterclaim or other similar action. Xenon shall fully cooperate with Genentech in defense of such claim, suit or other proceeding, including by being joined as a party. Xenon shall have the right to be represented by counsel of its own choice, and Genentech shall reimburse Xenon for all responsible out-of-pocket costs that Xenon incurs relating to such cooperation.

(b) Against Xenon. If the event that a Third Party shall make any claim or bring any suit or other proceeding against Xenon, or any of its Affiliates, sublicensees, or customers, for infringement or misappropriation of any Intellectual Property rights with respect to the research, development, making, using selling, offering for sale, import or export of any Collaboration Product or Licensed Product

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respecting which Milestone Payments or Royalties are payable to Xenon under this Agreement, the Parties shall cooperate and in good faith establish a plan for a common defense, and select the Party responsible for managing such plan.

10.8 Data Exclusivity

Subject to Article 12, Genentech shall have the sole right, but not the obligation, to obtain and control, at its own expense and discretion, any data/marketing exclusivity rights with respect to regulatory filings (including clinical, safety and efficacy data) with respect to Collaboration Compounds and Licensed Products including defense and enforcement of rights against Third Parties seeking marketing authorization approval from a regulatory agency (including the FDA, EMEA or equivalent) based on such filings. Such rights shall specifically include the right to take action in connection with Third Party applications for marketing authorization for Biosimilar Products or Generic Products that reference any Collaboration Compound or Licensed Product pursuant to Title VII of the United States Patient Protection and Affordable Care Act, Biologics Price Competition and Innovation Act, the Hatch-Waxman Act, EU Directive 2004/27/EC and any successor legislation or regulations relating thereto, and all similar foreign legislation with regard to the foregoing.

10.9 Trademarks

Genentech shall have the right to brand any and all Licensed Products owned or Controlled by Genentech using Genentech related trademarks and any other trademarks and trade names it determines appropriate for Licensed Products, which may vary by country or within a country ("**Product Marks**"). Genentech shall own all rights in the Product Marks and register and maintain Product Marks in the countries and regions it determines reasonably necessary.

ARTICLE 11
CONFIDENTIALITY

11.1 Confidential Information

Subject to the provisions of Section 11.2, all Confidential Information disclosed by a Party to the other Party during the Term shall not be used by the receiving Party except in connection with the activities contemplated by this Agreement or in order to further the purposes of this Agreement, shall be maintained in confidence by the receiving Party and shall not otherwise be disclosed by the receiving Party to any Third Party, without the prior written consent of the disclosing Party, except to the extent that the Confidential Information:

(i) Was known or used by the receiving Party prior to its date of disclosure to the receiving Party, by disclosing Party;

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(ii) is lawfully disclosed to the receiving Party either before or after the date of the disclosure to the receiving Party by the disclosing Party by a Third Party rightfully in possession of the Confidential Information and not bound by confidentiality obligations to the disclosing Party;

(iii) was available to the public or generally known to the public or in the public domain either before or after the date of the disclosure to the receiving Party by disclosing Party through no fault or omission on the part of the receiving Party; or

(iv) is independently developed by or for the receiving Party without access to, reference to or reliance upon the Confidential Information, as demonstrated by competent written records.

11.2 Exceptions

(a) The provisions of Section 11.1 shall not preclude the receiving Party from disclosing Confidential Information of the other Party:

(i) To the extent such Confidential Information is required to be disclosed by the receiving Party to comply with Applicable Laws or to defend or prosecute litigation, PROVIDED that the receiving Party provides prior written notice of such disclosure to the disclosing Party, provides the disclosing Party, to the extent possible, with sufficient time and opportunity to obtain a protective order for such Confidential Information and takes reasonable and lawful actions to avoid and/or minimize the degree of such disclosure;

(ii) In connection with discussions and negotiations with its officers, directors and shareholders as may be deemed necessary by the Company's Chief Executive Officer or Chief Financial Officer to procure support and approval of the transactions contemplated hereunder;

(iii) In order to comply with Applicable Laws governing disclosures under the receiving Party's financial statements, if, in the reasonable opinion of the receiving Party's auditors or Chief Financial Officer, such disclosure is necessary for such compliance;

(iv) To satisfy the due diligence exercise by any Third Party (including potential Sublicensees, investors, investment bankers, lenders, acquirers, merger partners, or other potential financial partners, and their attorneys and agents) provided such Third Party has executed a confidentiality agreement in a form consistent with the terms hereof to protect the confidentiality of such information;

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(v) In connection with discussions and negotiations with any Person in connection with a Sublicense or permitted subcontract hereunder, PROVIDED such Person has executed a confidentiality agreement in a form consistent with the terms hereof to protect the confidentiality of such information; or

(vi) To their respective legal counsel, accountants and auditors as necessary.

(b) Specific information shall not be deemed to be within any of the foregoing exclusions merely because it is embraced by more general information falling within these exclusions.

11.3 Press Releases

Without limiting the exclusions to Confidential Information under Section 11.2, neither Party shall issue any public announcement, press release or other publicity materials, or make any public presentation (each of the foregoing an "**Announcement**") with respect to the existence of, or any of the terms or conditions of, this Agreement or the programs or efforts being conducted by the other Party hereunder, in each case without the prior written consent of the other Party. Except under extraordinary circumstances, each Party shall provide the other with an advance copy of any such announcement at least ten (10) Business Days prior to its scheduled release. Each Party shall have the right to expeditiously review and recommend changes to any such Announcement and, except as otherwise required by Applicable Laws, the Party whose Announcement has been reviewed shall remove any Confidential Information of the reviewing Party that the reviewing Party deems to be inappropriate for disclosure.

The Parties agree that the public announcement of the execution of this Agreement shall be substantially in the form of the press release attached as Exhibit E, which shall be issued on January 9, 2012.

11.4 Publications

If either Party decides that public presentation or publication of the protocols or the results of arising from activities under the Research Program (such results are hereinafter referred to as a "**Disclosure**") is desirable, such results may be presented at professional symposiums or meetings, or published in scientific abstracts, journals, whether electronic or otherwise, subject to the prior review by both GNE and Xenon for protection of Patent Rights and protection of Confidential Information and subject to prior approval by both GNE and Xenon (such approval not to be unreasonably withheld). Each Party shall provide to the other the opportunity to review all proposed Disclosures. Each Party shall respond in writing promptly and in no event later than thirty (30) days after receipt of the proposed Disclosure with their comments or approval (and which approval shall not be unreasonably withheld). In the event of concern in the case of disclosure of a Party's own Confidential Information, the Parties agree not to make any

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presentation nor submit any publication that contains such Confidential Information of a Party until the concerned Party has provided its written approval or such Confidential Information has been removed. In the event of concern in the case of patentable Confidential Information, the Parties agree not to make any presentation or submit any publication until patent protection has been sought by the Party having responsibility therefor pursuant to Article 10 or such Party has specifically given its written authority to make such Disclosure. Authorship will be determined in accordance with generally accepted academic standards and customs. Proper acknowledgement will be made for the contributions of each Party to the results being presented or published.

11.5 Employee and Advisor Obligations

Xenon and Genentech each agree that they shall provide Confidential Information received from the other Party only to their respective employees, consultants, agents and advisors, who have a need to know such Confidential Information to assist such Party in fulfilling its obligations under this Agreement, PROVIDED that such employees, consultants, agents and advisors (i) have agreed, in writing, to treat such information and materials as confidential, (ii) have existing written agreements with such Party, or (iii) are subject to written corporate rules of the Party, that obligate each of the same to treat such information and materials as confidential, and copies of such written agreements are promptly provided to the other Party at such other Party's request.

11.6 Term of Confidentiality

All obligations of confidentiality imposed under this Article 11 shall expire 10 years following termination or expiration of this Agreement.

ARTICLE 12
TERM AND TERMINATION

12.1 Term

The term of the Agreement (the "**Term")** commences on the Effective Date and, unless earlier terminated pursuant to the provisions of this Article 12, will continue until the expiration of all payment obligations to Xenon on Licensed Products and Diagnostic Products hereunder.

12.2 Bankruptcy, Dissolution and Winding Up

In the event of proceedings being commenced by or against a Party respecting its bankruptcy, dissolution or winding up (other than dissolution or winding up of such Party in connection with a merger or amalgamation permitted by the provisions of Section 16.1) this Agreement may terminate forthwith at the election of the non-bankrupt Party with delivery of notice to the bankrupt Party, unless such proceedings have been dismissed within thirty (30) Business Days of the date on which they were commenced.

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12.3 Termination by the Parties

(a) This Agreement may be terminated by either Party in its entirety or, on a Licensed Product-by-Licensed Product or country-by-country basis, in the event of:

(i) An unremedied material breach by either Party, in accordance with the provisions of Section 12.4; or

(ii) A mutual written agreement between the Parties.

(b) Genentech may terminate this Agreement, in its entirety, with or without cause, upon three (3) months advance written notice to Xenon, such termination to be effective at any time on or after the third (3rd) anniversary of the Effective Date.

12.4 Termination for Breach/Termination Effect

(a) Upon a material breach of a representation, warranty or a material obligation of this Agreement by a Party (in such capacity, the "**Breaching Party**"), the other Party (in such capacity, the "**Non-Breaching Party**") may provide written notice (a "**Breach Notice**") to the Breaching Party specifying the material breach. For the purposes of this Section 12.4, a material breach includes, but is not limited to, Genentech's failure to pay any amount owing pursuant to Article 7 or Article 8 or Section 9.4 within thirty (30) days following the date due.

(b) If:

(i) the Breaching Party fails to cure a material breach that is the subject to the notice provided in subsection (a) above during the ninety (90) day period (or, if such material breach, by its nature, is a curable breach that the Parties agree is not curable within that ninety (90) day period, then within such longer period as would be reasonably necessary for a diligent party to cure such material breach) following the date on which the Breach Notice is provided; or

(ii) such material breach, by its nature, is incurable;

then the Agreement shall terminate, at the option of the Non-Breaching Party, in its entirety, on a Product-by-Product, or a country-by-country basis, upon written notice to the Breaching Party with immediate effect and without prejudice to the accrued rights of either Party, PROVIDED that if there is a dispute as to whether a material breach has occurred or has been cured or is incurable, such matter shall be first referred for resolution pursuant to Article 13 and termination shall be stayed pending resolution of such proceedings.

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(c) No payment or agreement to pay under this Agreement (including those referred to as non-refundable) shall in any way preclude or limit the rights of either Party to seek the full recovery of its damages or to seek equitable relief for breach of this Agreement by the other Party.

(d) Upon termination of this Agreement pursuant to Section 12.3(a)(i), in its entirety, or on a Product-by-Product and/or country-by-country basis (as applicable), occurring prior to expiration of the Term (except as provided in Section 12.7(ii)):

(i) each Party shall immediately, upon and in accordance with the other Party's written request, either deliver or destroy any Confidential Information relating to each terminated Product, except for one copy which may be retained in its confidential files for archive purposes only

PROVIDED that Genentech may retain such Confidential Information as is applicable to (x) Products in respect of which [†] and (y) [†]; and Xenon may retain such Confidential Information as is applicable to [†], and

(ii) To the extent permitted by Applicable Law, Genentech shall, at Xenon's cost, transfer and assign to Xenon all Regulatory Approvals for Products, and all materials submitted to Regulatory Authorities for such approvals, in each country in which this Agreement is terminated and in respect of any Products that are terminated on a Product-by-Product basis PROVIDED that Genentech may retain such Regulatory Approvals and materials as are applicable to (x) [†] and (y) [†].

(e) Upon termination by Genentech pursuant to Section 12.2 or 12.3(a)(i):

(i) all rights and licenses granted to Xenon under Article 9 shall immediately terminate,

(ii) all rights and licenses granted to Genentech under Article 9 shall become perpetual and irrevocable rights and licenses, and

(iii) Article 7 and Article 8 shall survive; provided that all Milestone Payments for Milestone Events occurring after the effective date of such termination and all Royalty Payments required to be paid after the effective date of such termination pursuant to such Article 8 shall be reduced by [†] percent ([†]%).

(f) Upon termination of the Agreement, in its entirety, by Xenon pursuant to Section 12.2 or 12.3(a)(i), effective as of the date of such termination:

(i) the exclusive rights and licenses granted to Genentech under Article 9 hereunder shall terminate,

(ii) Xenon shall grant to Genentech, under the Licensed IP (excluding Xenon Background Patent Rights described in Section I of Schedule C attached), a non-exclusive, fully paid, transferable, royalty free license to make, use, sell, offer for sale and import LMC Licensed Products.

(iii) Xenon shall grant to Genentech, under the Xenon Background IP (excluding Xenon Background Patent Rights described in Section I) and Xenon Collaboration IP a non-exclusive, fully paid, transferable, royalty free license to make and use (but not sell or offer for sale) SMC Licensed Products,

(iv) Genentech shall grant to Xenon:

(X) an exclusive , [†] license to all Patent Rights within Genentech Termination IP that Cover (and, in the case of Patent Rights that are patent applications, would infringe a Valid Claim of such patent application if it were to issue as a patent), the composition of matter of Termination Compounds; and

(Y) a non-exclusive, [†] license to all Know-How under Genentech Termination IP,

in each case (X) and (Y) above, to make, use, sell, offer for sale and import Termination Compounds and Termination Compound Products, within the field of the treatment of pain through a NaV1.7 mechanism,

(v) all payment obligations owed by Genentech to Xenon under Article 7 and Article 8 for LMC Licensed Products that would otherwise have been payable to Xenon as of the date of breach shall survive. For avoidance of doubt, [†]

(vi) except as exclusively licensed to Xenon in Section 12.4(f)(iv)(X) above, the provisions of Section 10.1(c) shall apply to Joint Collaboration IP;

(vii) The terms of Section 10.4(b) shall apply with respect to Patent Rights within Genentech Termination IP [†]; and

(viii) [†].

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(g) Upon termination by Xenon, on a Product-by-Product and/or country-by-country basis (as applicable) pursuant to Section 12.3(a)(i), the provisions of Section 12.4(f) above shall apply, *mutatis mutandis*, respecting the relevant Product(s) in the relevant countries.

12.5 Termination by Genentech for Convenience

In the event that Genentech terminates this Agreement pursuant to Section 12.3(b), the provisions of Article 12.4(f) shall apply, *mutatis mutandis*, except that, effective as of the date of such termination:

(a) **[†].**

(b) **[†].**

12.6 Ceasing Development

In the event that Genentech Ceases Development of any and all SMC Licensed Products in the Territory containing Collaboration Compounds or containing other Compounds to which Xenon is eligible for Milestone Payments and/or Royalties under this Agreement:

(i) **[†]**

(ii) **[†]**.

[†].

[†].

[†].

12.7 Ongoing Obligations

Except where explicitly provided elsewhere within this Agreement, termination of this Agreement for any reason, or expiration of this Agreement, will not affect:

(i) obligations of the Parties, including the payment of any amounts payable pursuant to the provisions of Article 7 and Article 8; or

(ii) rights and obligations of the Parties, which, from the context thereof, are intended to survive termination or expiration of this Agreement, including Section 4.4, 6.3(b), 9.3, 9.5 and Articles 1, 10, 11, 12, 13, 14. 15 and 16 (except 16.1(f)(ii).

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

12.8 Dispute Resolution

Termination under this Article 12 for whatever reason will be automatically stayed for the duration of any proceedings initiated under Article 13, and any applicable cure periods shall commence upon the resolution of such proceedings.

ARTICLE 13
DISPUTE RESOLUTION

13.1 Internal Mediation

Except as otherwise provided under Sections 12.5 and 13.3, and except for an application for an injunction, and with the exception of any matter properly considered by the JRC, if any dispute, disagreement, claim or controversy (in each case, a "**Disputed Matter**") exists between the Parties arising out of or relating to any provision of this Agreement then such Disputed Matter shall first be referred jointly to two (2) designees, one of each of Genentech and Xenon, who shall be an executive officer of each Party (or his/her designee), who shall meet personally and attempt in good faith using their best efforts to resolve the Disputed Matter. If such designees fail to resolve the Disputed Matter within thirty (30) Business Days (or longer if the Parties mutually agree) after referral of the matter to them, the Parties shall proceed to the arbitration process set forth in Section 13.2.

13.2 Arbitration.

(a) Except as otherwise expressly provided in this Agreement, the Parties agree that any Disputed Matter not resolved internally by the Parties pursuant to Section 13.1 shall be resolved through binding arbitration conducted by the International Chamber of Commerce in accordance with the then prevailing Rules of Arbitration of the International Chamber of Commerce (for purposes of this Article 13, the "**Rules**"), except as modified in this Agreement, applying the substantive law specified in Section 16.2.

(b) **Arbitrators; Location**. Each Party shall select one (1) arbitrator, and the two (2) arbitrators so selected shall choose a third arbitrator. All three (3) arbitrators shall serve as neutrals and have at least ten (10) years of (a) dispute resolution experience (including judicial experience) and/or (b) legal or business experience in the biotech or pharmaceutical industry. In any event, at least one (1) arbitrator shall satisfy the foregoing experience requirement under clause (b). If a Party fails to nominate its arbitrator, or if the Parties' arbitrators cannot agree on the third, the necessary appointments shall be made in accordance with the Rules. Once appointed by a Party, such Party shall have no ex parte communication with its appointed arbitrator. The arbitration proceedings shall be conducted in **[†]**. The arbitration proceedings and all pleadings and written evidence shall be in the English language. Any written evidence originally in another language shall be submitted in English translation accompanied by the original or a true copy thereof.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(c) **Procedures; Awards.** Each Party agrees to use reasonable efforts to make all of its current employees available, if reasonably needed, and agrees that the arbitrators may determine any person as necessary. The arbitrators shall be instructed and required to render a written, binding, non-appealable resolution and award on each issue that clearly states the basis upon which such resolution and award is made. The written resolution and award shall be delivered to the Parties as expeditiously as possible, but in no event more than ninety (90) days after conclusion of the hearing, unless otherwise agreed by the Parties. Judgment upon such award may be entered in any competent court or application may be made to any competent court for judicial acceptance of such an award and order for enforcement. Each Party agrees that, notwithstanding any provision of applicable law or of this Agreement, it will not request, and the arbitrators shall have no authority to award, punitive or exemplary damages against any Party.

(d) **Costs.** The prevailing Party, as determined by the arbitrators, shall be entitled to (a) its share of fees and expenses of the arbitrators and (b) its attorneys' fees and associated costs and expenses. In determining which Party "prevailed," the arbitrators shall consider (i) the significance, including the financial impact, of the claims prevailed upon and (ii) the scope of claims prevailed upon, in comparison to the total scope of the claims at issue. If the arbitrators determine that, given the scope of the arbitration, neither Party "prevailed," the arbitrators shall order that the Parties (1) share equally the fees and expenses of the arbitrators and (2) bear their own attorneys' fees and associated costs and expenses.

(e) **Interim Equitable Relief.** Notwithstanding anything to the contrary in this Section 13.2, in the event that a Party reasonably requires relief on a more expedited basis than would be possible pursuant to the procedure set forth in this Article 13, such Party may seek a temporary injunction or other interim equitable relief in a court of competent jurisdiction pending the ability of the arbitrators to review the decision under this Section 13.2. Such court shall have no jurisdiction or ability to resolve Disputed Matters beyond the specific issue of temporary injunction or other interim equitable relief.

(f) **Protective Orders; Arbitrability.** At the request of either Party, the arbitrators shall enter an appropriate protective order to maintain the confidentiality of information produced or exchanged in the course of the arbitration proceedings. The arbitrators shall have the power to decide all questions of arbitrability.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(g) **Subject Matter Exclusions.** Notwithstanding the provisions of Section 13.2, any Disputed Matter not resolved internally by the Parties pursuant to Section 13.1 that involves the validity or infringement of a Patent reading on the Licensed Product (a) that is issued in the United States shall be subject to actions before the United States Patent and Trademark Office and/or submitted exclusively to the federal court located in the jurisdiction of the district where any of the defendants resides and resolved applying the patent laws of the United States; and (b) that is issued in any other country shall be brought before an appropriate regulatory or administrative body or court in that country, and the Parties hereby consent to the jurisdiction and venue of such courts and bodies.

(h) **Continued Performance.** Provided that this Agreement has not terminated, the Parties agree to continue performing under this Agreement in accordance with its provisions, pending the final resolution of any Disputed Matter.

13.3 Audit—Binding Determinations

In the event that any Disputed Matter involving the determination of any amounts due to either Party pursuant to the audit process set out in Section 8.12 has not been resolved pursuant to the procedures set out in Section 13.1, then the Parties shall (i) use reasonable efforts to reach agreement on the appointment of one (1) internationally-recognized independent accounting firm to determine the matter, (ii) if the Parties cannot reach agreement on such accounting firm within ten (10) Business Days, then each Party shall appoint one (1) internationally-recognized accounting firm to determine the matter, and (iii) if such firms cannot reach agreement within thirty (30) Business Days from their appointment, such firms shall choose a third internationally-recognized independent accounting firm who shall make the final determination as promptly as possible, which determination shall be final and binding on the Parties.

ARTICLE 14
REPRESENTATIONS AND WARRANTIES

14.1 Representation of Authority; Consents

Each Party represents and warrants to the other that:

(i) It is duly incorporated and organized and validly existing under the laws of its jurisdiction of incorporation;

(ii) It has full right, power and authority to enter into this Agreement and to perform its obligations under this Agreement;

(iii) This Agreement has been duly executed by such Party and constitutes a legal, valid and binding obligation of such Party, enforceable in accordance with its terms;

(iv) The execution, delivery and performance of this Agreement by such Party does not and will not during the Term: (A) violate any Applicable Laws; nor (B) conflict with any agreement, instrument or understanding, oral or written, to which it or any of its Affiliates is a party or by which it or such Affiliates may be bound; nor (C) conflict with or violate such Party's corporate charter and bylaws; and

(v) No consents, approvals or authorizations under Applicable Laws or from Third Parties are required to be obtained in connection with the execution, delivery and performance of this Agreement.

14.2 Intellectual Property

Xenon represents and warrants to Genentech that, as of the Effective Date:

(i) It has not received notice of any claim made against it asserting the invalidity, misuse, unregisterability, unenforceability or infringement of any of its Intellectual Property which is the subject of this Agreement and has not received notice of any claim made against it challenging its right to use or ownership of any such Intellectual Property or making any adverse claim of ownership thereof;

(ii) It has not received any notice from any Third Party that there is any pending or threatened claim, demand or litigation which alleges that such Party's activities to date relating to any such Intellectual Property have violated, or by conducting its business as currently proposed to be conducted hereunder would violate, the Intellectual Property rights of such Third Party;

(iii) **[†];** and

(iv) **[†]**

14.3 Knowledge of Pending or Threatened Litigation

Xenon represents and warrants to Genentech that it has received no notice of any claim, investigation, suit, action or proceeding, pending or threatened, against Xenon before or by any domestic or foreign, federal, state, provincial or local court, agency, department, legislative body, commission, board or other administrative or governmental body, or any self-regulating body or arbitrator that **[†].**

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

14.4 Joint and Several Liability

Roche and GNE are and shall be jointly and severally responsible and liable for all obligations of Genentech (but not obligations assigned to one of Roche or GNE) under this Agreement.

14.5 Disclaimer of Warranty

(a) EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, EACH PARTY EXPRESSLY DISCLAIMS, WAIVES, RELEASES, AND RENOUNCES ANY WARRANTY, EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE, INCLUDING ANY WARRANTY OF MERCHANTABILITY, DURABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND WARRANTIES ARISING FROM USAGE OF TRADE OR COURSE OF DEALING, RELATING TO PRODUCT OR OTHER PRODUCT OR SERVICE PROVIDED BY EITHER PARTY TO THE OTHER HEREUNDER.

ARTICLE 15
INDEMNIFICATION

15.1 Indemnity By Genentech

Genentech agrees to defend Xenon at Genentech's cost and expense, and will indemnify and hold Xenon and its directors, officers, employees and agents (the "**Xenon Indemnified Parties**") harmless from and against any action, suit, liabilities, losses, costs, damages, claims, demands, encumbrances, fees or expenses (including reasonable legal fees and disbursements) (collectively, a "**Loss**") arising out of any Third Party claim resulting from:

(a) Any breach by Genentech of any of its representations, warranties or obligations pursuant to this Agreement;

(b) The negligence or wilful misconduct of Genentech; or

(c) Any injury, damage or loss resulting from any Product Commercialized by Genentech or its Sublicensees or Genentech Licensees,

for each of (a) –(c), except to the extent that Xenon is obliged to indemnify Genentech pursuant to the provisions of Section 15.2.

In the event of any such claim against the Xenon Indemnified Parties by any Third Party, Xenon shall promptly notify Genentech in writing of the claim and Genentech shall manage and control, at its sole expense, the defence of the claim and its settlement, keeping Xenon reasonably advised of the status of the defence and/or settlement. No settlement shall be finalized without

obtaining Xenon's prior written consent, which shall not be unreasonably withheld, except that, in the case of a settlement that does not require an admission or action on the part of Xenon, subject to compliance with Section 10.7, Xenon's consent shall not be required so long as is unconditionally released from all liability in such settlement. The Xenon Indemnified Parties shall cooperate with Genentech and may, at their option and expense, be represented in any such action or proceeding. Genentech shall not be liable for any litigation costs or expenses incurred by the Xenon Indemnified Parties without Genentech's prior written authorization, unless Genentech is in breach of any of its obligations pursuant to this Section. In addition, Genentech shall not be responsible for the indemnification or defence of any Xenon Indemnified Party to the extent any Third Party claims arises from any negligent or intentional acts or omissions by any Xenon Indemnified Party, or the breach by Xenon of any obligation, representation or warranty under this Agreement, or any claims compromised or settled without Genentech's prior written consent.

15.2 Indemnity by Xenon

Xenon agrees to defend Genentech at Xenon's cost and expense, and will indemnify and hold Genentech and their respective directors, officers, employees and agents (the "**Genentech Indemnified Parties**") harmless from and against any action, suit, liabilities, losses, costs, damages, claims, demands, encumbrances, fees or expenses (including reasonable legal fees and disbursements) arising out of any Third Party claim resulting from:

(a) Any breach by Xenon of any of its representations, warranties or obligations pursuant to this Agreement; or

(b) The negligence or wilful misconduct of Xenon.

In the event of any claim against the Genentech Indemnified Parties by any Third Party, Genentech shall promptly notify Xenon in writing of the claim and Xenon shall manage and control, at its sole expense, the defence of the claim and its settlement, keeping Genentech reasonably advised of the status of the defence and/or settlement. No settlement shall be finalized without obtaining Genentech's prior written consent, which consent shall not be unreasonably withheld, except that, in the case of a settlement that does not require an admission or action on the part of Genentech, subject to compliance with Section 10.7, Genentech's consent shall not be required so long as Genentech is unconditionally released from all liability in such settlement. The Genentech Indemnified Parties shall cooperate with Xenon and may, at their option and expense, be represented in any such action or proceeding. Xenon shall not be liable for any litigation costs or expenses incurred by the Genentech Indemnified Parties without Xenon's prior written authorization, unless Xenon is in breach of any of its obligations pursuant to this Section. In addition, Xenon shall not be responsible for the indemnification or defence of any Genentech Indemnified Party to the extent any Third Party Claim arises from any negligent or intentional acts or omissions by any Genentech Indemnified Party, or the breach by Genentech of any obligation, representation or warranty under this Agreement, or any claims compromised or settled without Xenon's prior written consent.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

15.3 Method of Asserting Claims

In the event that any written claim or demand for which a Party (the "**Indemnifying Party**") would be liable to the other Party (the "**Indemnified Party**") hereunder is asserted against or sought to be collected from any Indemnified Party by a Third Party, such Indemnified Party shall promptly, but in no event more than ten (10) Business Days following such Indemnified Party's receipt of such claim or demand, notify the Indemnifying Party of such claim or demand and the amount or the estimated amount thereof to the extent then feasible (the "**Claim Notice**"). The failure to provide such notice will not affect any rights under this Agreement except to the extent that the Indemnifying Party is materially prejudiced by such failure.

15.4 Notice Period

The Indemnifying Party shall have sixty (60) days from the delivery or mailing of the Claim Notice (the "**Notice Period**") to notify the Indemnified Party whether or not it desires to defend the Indemnified Party against such claim or demand. An election to assume the defense of such claim or demand shall not be deemed to be an admission that the Indemnifying Party is liable to the Indemnified Party in respect of such claim or demand. All costs and expenses incurred by the Indemnifying Party in defending such claim or demand shall be a liability of, and shall be paid by, the Indemnifying Party; PROVIDED, however, that the amount of such expenses shall be a liability of the Indemnifying Party hereunder, subject to the limitations set forth in this Article 15.

15.5 Reimbursement

In the event that it is ultimately determined that the Indemnifying Party is not obligated to indemnify, defend or hold the Indemnified Party harmless from and against any Third Party claim, the Indemnified Party shall reimburse the Indemnifying Party for any and all costs and expenses (including without limitation, reasonable attorney's fees and court costs) incurred by the Indemnifying Party in its defense of the Third Party claim. In the event that the Indemnifying Party notifies the Indemnified Party within the Notice Period that it desires to defend the Indemnified Party against such claim or demand, the Indemnifying Party shall have the right to defend the Indemnified Party by appropriate proceedings. If any Indemnified Party desires to participate in, but not control, any such defense or settlement, it may do so at its sole cost and expense.

15.6 Settlement

The Indemnified Party shall not settle a Third Party claim or demand without the consent of the Indemnifying Party, which shall not be unreasonably withheld. The Indemnifying Party may settle any claim or demand for monetary damages without obtaining consent from the Indemnified Party; it being understood that the Indemnifying Party shall not, without the prior written consent of the Indemnified Party, which shall not be unreasonably withheld, settle, compromise or offer to settle or compromise any such claim or demand on a basis which would result in the imposition of a consent order, injunction or decree that would restrict the future activity or conduct of the Indemnified Party thereof.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

15.7 Grant of Access and Assistance to Indemnifying Party

To the extent the Indemnifying Party shall control or participate in the defense or settlement of any Third Party claim or demand, the Indemnified Party will give the Indemnifying Party and its counsel access to, during normal business hours, the relevant business records and other documents, and shall permit them to consult with the employees and counsel of the Indemnified Party. The Indemnified Party shall use its reasonable efforts to assist in the defense of all such claims.

15.8 Conflict of Interest or Failure to Defend

If the Indemnifying Party shall fail to undertake in a timely manner the defense of any Third Party claim or it is determined that representation by the Indemnifying Party's counsel of both the Indemnifying Party and the Indemnified Party may present a conflict of interest, the Indemnified Party shall have the right to undertake the defense or settlement thereof at the Indemnifying Party's expense. If the Indemnified Party assumes the defense of any such claim or proceeding and proposes to settle such claim or proceeding prior to a final judgment thereon or to forgo any appeal with respect thereto, then the Indemnified Party shall give the Indemnifying Party timely written notice and the Indemnifying Party shall have the right to participate in the settlement or assume or reassume the defense of such claim or proceeding.

15.9 Insurance Proceeds

Any indemnification hereunder shall be made net of any insurance proceeds recovered by the Indemnified Party.

15.10 Limitation

EXCEPT FOR CLAIMS OF A THIRD PARTY THAT ARE SUBJECT TO INDEMNIFICATION UNDER SECTIONS 15.1 OR 15.2, OR AS OTHERWISE SET EXPRESSLY STATED IN THIS AGREEMENT, IN NO EVENT SHALL ANY PARTY NOR ANY OF THEIR AFFILIATES NOR THEIR RESPECTIVE OFFICERS, DIRECTORS OR EMPLOYEES BE LIABLE TO AN OTHER PARTY HEREUNDER FOR ANY SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES (INCLUDING LOSS OF PROFITS) WHETHER BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT OR ANY OTHER LEGAL THEORY.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

15.11 Insurance.

(a) Coverage. Each Party shall maintain, at its own cost, the insurance coverages set forth in this Section 15.11(a); provided, however, Genentech has the right, in its sole discretion, to self-insure in part or in whole for any such coverage.

(i) Commencing as of the Effective Date, and thereafter for the period of time required under Section 15.11(b), each Party shall obtain and maintain on an ongoing basis, Commercial General Liability insurance, including contractual liability, in the minimum amount of five million dollars (US$5,000,000) per occurrence, combined single limit for bodily injury and property damage liability.

(ii) Commencing as of the date Genentech files an IND for a product under this Agreement, and thereafter for the period of time required under Section 15.11(b), Genentech shall obtain and maintain on an ongoing basis, Clinical Trials Coverage and Products Liability and Completed Operations insurance in the minimum amount of ten million dollars (US$10,000,000) per occurrence, combined single limit for bodily injury and property damage liability.

(iii) Commencing as of the Effective Date, and thereafter for the period of time required under Section 15.11(b), Xenon shall obtain and maintain such statutory Workers Compensation insurance as is required under Applicable Law, Genentech shall obtain and maintain on an ongoing basis, statutory Workers' Compensation insurance with limits at minimum one million dollars (US$1,000,000) and each Party shall obtain and maintain Employers Liability insurance with limits at a minimum one million dollars (US$1,000,000).

(b) Additional Requirements. Except to the extent that Genentech self-insures as authorized under Section 15.11(a), the following provisions apply:

(i) All insurance coverages shall be primary insurance with respect to each Party's own participation under this Agreement, and shall be maintained with an insurance company or companies having an A.M. Best's rating (or its equivalent) of A-XII or better.

(ii) The insurance policies shall be under an occurrence form, but if only a claims-made form is available to a Party, then in such a case, such Party shall maintain the insurance coverage for at least five (5) years following such Party's completing the performance of its obligations under this Agreement.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(iii) Each Party shall provide to the other Party its respective certificates of insurance evidencing the insurance coverages set forth in Section 15.11(a). Each Party shall provide to the other Party at least thirty (30) calendar days prior written notice of any cancellation, nonrenewal or material change in any of the insurance coverages. Each Party shall, upon receipt of written request from the other Party, provide renewal certificates to the other Party for as long as such Party is required to maintain insurance coverages hereunder.

ARTICLE 16
GENERAL

16.1 Assignment

Except as hereinafter provided in this Section 16.1, this Agreement shall not be assigned in whole or in part by either Party without the prior written consent of the other Party. Any attempt by either Party to assign this Agreement without such consent shall be null and void and of no effect PROVIDED that either Party may assign this Agreement without the consent of the other Party:

(a) in whole or in part to any Affiliate of a Party, PROVIDED that the assigning Party notifies the non-assigning Party in writing within twenty (20) Business Days of such assignment and the assignee promptly enters into a written agreement with the non-assigning Party wherein the assignee agrees to assume responsibility for and be bound by all of the terms of this Agreement in addition to the assigning Party and FURTHER PROVIDED that the assigning Party shall continue to be bound by all such terms and shall be jointly and severally liable (with the assignee) for all obligations and liabilities imposed upon the assigning Party under this Agreement; or

(b) in whole in connection with a transfer or sale of all or substantially all of the assets or business of a Party or in the event of such Party's merger or amalgamation or other business combination with another Person (a "**Change of Control Event**") provided that such Party or its successor (as applicable) gives notice in writing to the other Party within ten (10) Business Days following such Change of Control Event, **[†]**;

(c) No assignment shall release any Party from responsibility for the performance of any accrued obligation of such Party hereunder;

(d) This Agreement shall be binding upon and enforceable against the successor to or any permitted assignees from either of the Parties hereto;

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(e) **[†]** and

(f) In the event that this Agreement is assigned by Xenon to a Third Party or a successor in connection with a Change of Control Event (as defined above), notwithstanding any provisions of this Agreement to the contrary:

(i) **[†]**;

(ii) **[†]**:

(A) **[†]**; and

(B) **[†]**.

16.2 Governing Law

Except as otherwise provided in Section 13.2 (g) with respect to intellectual property disputes this Agreement shall be construed and the respective rights of the Parties determined according to the substantive laws of **[†]** notwithstanding the provisions governing conflict of laws under such law to the contrary.

16.3 United Nations Convention

THE PARTIES EXPRESSLY DISCLAIM AND EXCLUDE THE APPLICATION OF THE UNITED NATIONS CONVENTION ON CONTRACTS FOR THE INTERNATIONAL SALE OF GOODS.

16.4 Business Day

In the event that an obligation to be performed under this Agreement falls due on a day that is not a Business Day, the obligation shall be deemed due on the next Business Day thereafter.

16.5 Notices

Notices, invoices, communications, and payments hereunder shall be deemed made and given three (3) days after sending if sent by registered or certified envelope, postage prepaid, and one (1) day after sending if sent by courier or by facsimile transmission, and addressed to the Party to receive such notice, invoice, or communication at the address given below, or such other address as may hereafter be designated by notice in writing by one Party to the other from time to time:

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

To Xenon:	Xenon Pharmaceuticals Inc. 3650 Gilmore Way Burnaby, BC V5G 4W8 Attention: President and Chief Executive Officer Facsimile: 604-484-3450
With a copy (which shall not constitute notice) to:	Xenon Pharmaceuticals Inc. 3650 Gilmore Way Burnaby, BC V5G 4W8 Attention: General Counsel and Corporate Secretary Facsimile: 604-484-3450
To Genentech:	Genentech, Inc. 1 DNA Way, South San Francisco, CA 94080 Attn: Corporate Secretary Facsimile: (650) 467-9146 Attention: Facsimile:

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

with a required copy to each of:	Genentech, Inc. 1 DNA Way, South San Francisco, CA 94080 Attn: VP, Genentech Partnering Facsimile: (650) 225-3009
	and
	Genentech, Inc. 1 DNA Way, South San Francisco, CA 94080 Attn: Head of Alliance Management Facsimile: +1.650.467.3294

16.6 Force Majeure

No failure or omission by either Party in the performance of any obligation of this Agreement shall be deemed a breach of this Agreement or create any liability if the same shall arise from any cause or causes beyond the reasonable control of such Party, including the following: acts of God; acts or omissions of any government; any inordinate or unanticipated delays in the regulatory review or governmental approval processes that are within the sole control of such government or governmental agency; any rules, regulations or orders issued by any governmental authority or by any officer, department, agency or instrumentality thereof; fire; storm; flood; earthquake; accident; war; rebellion; insurrection; riot; and invasion; PROVIDED that such failure or omission resulting from one of the above causes is corrected as soon as is practicable after the occurrence of one or more of the above mentioned causes by the Party claiming force majeure taking all reasonable steps within its power to resume compliance with its obligations with the least possible delay. The Party claiming force majeure shall notify the other Party with notice of the force majeure event as soon as practicable, but in no event longer than ten (10) Business Days after its occurrence, which notice shall reasonably identify such obligations under this Agreement and the extent to which performance thereof will be affected. In such event, the Parties shall meet promptly to determine an equitable solution to the effects of any such event.

16.7 Independent Contractors

It is understood and agreed that the relationship between the Parties is that of independent contractors and that nothing in this Agreement shall be construed as authorization for either Xenon or Genentech to act as agent for the other.

16.8 No Strict Construction

This Agreement has been prepared jointly and shall not be strictly construed against either Party.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

16.9 No Implied Waivers; Rights Cumulative

No failure on the part of Xenon or Genentech to exercise, and no delay in exercising, any right, power, remedy or privilege under this Agreement, or provided by statute or at law or in equity or otherwise, shall impair, prejudice or constitute a waiver of any such right, power, remedy or privilege or be construed as a waiver of any breach of this Agreement or as an acquiescence therein, nor shall any single or partial exercise of any such right, power, remedy or privilege preclude any other or further exercise thereof or the exercise of any other right, power, remedy or privilege.

16.10 Severability

If any provision hereof should be held invalid, illegal or unenforceable in any respect in any jurisdiction, the Parties hereto shall substitute, by mutual consent, valid provisions for such invalid, illegal or unenforceable provisions which valid provisions in their economic effect are sufficiently similar to the invalid, illegal or unenforceable provisions that it can be reasonably assumed that the Parties would have entered into this Agreement with such valid provisions. In case such valid provisions cannot be agreed upon, the invalid, illegal or unenforceable of one or several provisions of this Agreement shall not affect the validity of this Agreement as a whole.

16.11 Execution in Counterparts

This Agreement may be executed in counterparts, each of which counterparts, when so executed and delivered, shall be deemed to be an original, and all of which counterparts, taken together, shall constitute one and the same instrument. For purposes of execution, a copy of this Agreement or any amendment hereto will be deemed an original (including a printed copy of a PDF file delivered via email or a facsimile transmitted telephonically via a fax machine). Notwithstanding the foregoing, the Parties shall deliver original execution copies of this Agreement to one another as soon as practicable following such execution.

16.12 No Third Party Beneficiaries or Obligors

No Person other than Genentech, Xenon and their respective permitted successors and assigns hereunder shall be deemed an intended beneficiary hereunder, nor have any right to enforce any obligation of any Party to this Agreement, nor shall any Person other than Genentech and Xenon and their respective permitted successors and assigns have any obligations to any Party under this Agreement.

16.13 Entire Agreement

This Agreement contains the entire agreement of the Parties with respect to the matters referred to herein.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

16.14 Amendment

This Agreement, including the Schedules hereto (with the exception of Schedule B, which may be amended pursuant to Section 2.3), may only be amended by a written document duly executed by authorized signatories of each of the Parties.

16.15 Compliance

The Parties shall comply fully with all Applicable Laws in connection with their respective activities under this Agreement.

[SIGNATURES ON NEXT PAGE]

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

XENON PHARMACEUTICALS INC.

By: /s/ Simon Pimstone
Name: Simon Pimstone
Title: President and Chief Executive Officer

GENENTECH, INC.

By: /s/ Steve Krognes
Name: Steve Krognes
Title: Chief Financial Officer

F. HOFFMANN-LA ROCHE LTD

By: /s/ Andrew Jefferson
Name: Andrew Jefferson
Title: Head of Asset Management & Operations

By: /s/ Stefan Arnold
Name: Stefan Arnold
Title: Head of Legal Pharma

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SCHEDULE A

NAV1.7

NCBI: ACCESSION Q15858, VERSION Q15858.3, GI:327478559

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1981 kdskeskk
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[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

SCHEDULE B
RESEARCH PLAN

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

Xenon Pharmaceuticals Inc.,
&
Genentech, Inc.,

Research Plan

Dec. 21, 2011

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

TABLE OF CONTENTS

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

1. BACKGROUND

This research plan outlines the activities of the collaborative Research Program . **[†]**

[†]

2. ACTIVITY 1: [†]

[†]

3. ACTIVITY 2: [†]

[†]

4. ACTIVITY 3: [†]

[†]

5. XENON FTES

Department	Xenon FTEs	Initial Activities of Xenon FTEs
Medicinal Chemistry	**[†]**	**[†]**
In Vitro Pharmacology / Biochemical Pharmacology	**[†]**	**[†]**
DMPK	**[†]**	**[†]**
In Vivo Biology	**[†]**	**[†]**
Total	**[†]**	

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

SCHEDULE C
XENON BACKGROUND PATENT RIGHTS

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Entry	Status	Type	Title/Description	Patent or Application No.	Filing Date	Priority Date
Section I: [†]Series Compounds						
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
Section II: Diagnostics for [†] Variants						
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
Section III: Screening for $Na_V1.7$ Selective Compounds						
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

Section IV: Sodium Channel Counterscreens

Entry	Status	Type	Title/Description	Patent or Application No.	Filing Date	Priority Date
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**
[†]	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**	**[†]**

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[†]						
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[†]	[†]	[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]	[†]	[†]

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[†]	[†]	[†]	[†]	[†]	[†]	[†]

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[†]	[†]	[†]	[†]	[†]	[†]	[†]

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[†]	[†]	[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]	[†]	[†]

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[†]	[†]	[†]	[†]	[†]	[†]	[†]

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[†]	[†]	[†]	[†]	[†]	[†]	[†]

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[†]	[†]	[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]	[†]	[†]

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SCHEDULE D
GENENTECH FIRST RIGHT TO [†]

The operation of Genentech's First Right **[†]**shall be as set-out below:

(a) **[†]**:

(i) **[†]**; or

(ii) **[†]**.

(b) **[†]**:

(i) **[†]**;

(ii) **[†]**;

(iii) **[†]**; and

(iv) **[†]**.

(c) **[†]**.

(d) **[†]**:

(i) **[†]**; and

(ii) **[†]**.

(e) **[†]**.

(f) **[†]**.

(g) **[†]**.

(h) **[†]**.

(i) **[†]**.

(j) **[†]**:

(i) **[†]**;

(ii) **[†]**; and

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(iii) **[†]**.

(k) In the event that either:

(i) **[†]**;

(ii) **[†]**; or

(iii) **[†]**;

[†].

(l) **[†]**.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

SCHEDULE E
PRESS RELEASE

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

FOR IMMEDIATE RELEASE

Vancouver, Canada, 9 January 2012

Xenon to Collaborate with Genentech on Discovery of Novel Targeted Pain Therapeutics

Xenon today announced a strategic alliance with Genentech, a member of the Roche Group (SIX: RO, ROG; OTCQX: RHHBY), to discover and develop compounds and companion diagnostics for the potential treatment of pain.

“We are delighted to be collaborating with Genentech” said Simon Pimstone, President and CEO of Xenon. “Genentech is among the world’s leading biotech companies and an ideal strategic partner for Xenon as we share a common emphasis on using human genetics for drug development. Further, this collaboration allows Xenon to both deepen and broaden our pipeline of novel medicines in development”.

Xenon and Genentech will collaborate on the discovery of new therapeutic approaches for treating pain. Under the terms of the agreement, Genentech has an exclusive license to compounds and a non-exclusive license to diagnostics from Xenon for development and commercialization of products. Xenon will receive an undisclosed upfront payment, research funding and is eligible to receive research, development and commercialization milestone payments, totaling up to $650 million for multiple products and indications. In addition, Xenon will receive royalties on sales of products resulting from the collaboration.

Michael Hayden, CSO of Xenon added: “This new alliance, which represents our sixth partnership with a major pharmaceutical company to date, once again highlights the keen interest in Xenon’s unique genetics approach and in our translational R&D capabilities.”

About Xenon Pharmaceuticals Inc. (Xenon)

Xenon is a privately owned, clinical genetics-based drug discovery and development company engaged in developing small molecule therapies based on the genetic causes of select metabolic, neurological and cardiovascular diseases. For more information, visit the Company’s website at http://www.xenon-pharma.com.

For more information regarding this press release, contact:

Dr. Robin Sherrington, VP, Business & Corporate Development (604) 484-3363 ddunn@xenon-pharma.com

This release contains forward-looking statements that are not based on historical fact. These forward-looking statements involve risks, uncertainties and other factors that may cause the actual results, events or developments to be materially different from those expressed or implied by such forward-looking statements. Readers are cautioned not to place undue reliance on such forward-looking statements.

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XENON
PHARMACEUTICALS INC.

3650 Gilmore Way
Burnaby, BC
Canada V5G 4W8

T 604-484-3300
F 604-484-3450

www.xenon-pharma.com

August 14, 2012

Genentech, Inc.
1 DNA Way
South San Francisco
California, USA 94080

Re: Collaborative Research and License Agreement between Xenon Pharmaceuticals Inc. ("**Xenon**") and Genentech, Inc. ("**GNE**") together with F. Hoffmann-La-Roche Ltd ("**Roche**") (GNE and Roche, collectively, "**Genentec**h"), made as of December 22, 2011 (the **"Agreement**")

Attention: Shane Shih, Senior Manager Alliance Management

Dear Shane,

Further to our recent discussions and in accordance with Section 16.14 of the Agreement, Xenon and Genentech agree as follows:

1. This amendment to the Agreement shall hereinafter be referred to as the "**Letter Agreement**". Except as specifically defined below, capitalized terms used in this Letter Agreement shall have the same meaning as ascribed to such terms in the Agreement.

2. Subsection 2.5(a) of the Agreement is hereby amended by deleting the second sentence within such Subsection in its entirety, and replacing it with the following:

"For avoidance of doubt, the number of FTEs of Xenon funded by Genentech (i) beginning on the Effective Date through to June 30, 2012 shall not be less than **[†]** FTEs; and (ii) beginning on July 1, 2012 and continuing throughout the remainder of the initial **[†]** years of the Research Term shall not be less than **[†]** FTEs."

3. The definition of "FTE Rate" under Section 1.1 of the Agreement is hereby amended by deleting it in its entirety, and replacing it with the following:

"**FTE Rate**" shall mean the amount Genentech will pay to Xenon over a consecutive twelve (12) month period during the Research Term to support one (1) Xenon FTE dedicated to the Research Plan. The FTE Rate shall be (i) **[†]**and (ii) **[†]**."

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

4. A new Subsection 3.9(iv) is hereby added to the end of Section 3.9 as follows:

"3.9(iv) Notwithstanding anything to the contrary in Subsection 3.9(ii) of the Agreement, Genentech hereby agrees that Xenon may grant to **[†]**; *provided that* **[†]** will have no rights or license to **[†]** (except through an agreement with an Approved Third Party Contractor). Pursuant to an agreement among Xenon, **[†]** and such Approved Third Party Contractor (such agreement which shall be prepared by **[†]** and agreed to by Xenon, acting reasonably), Xenon may also grant to one or more of the Approved Third Party Contractors, such rights and license as are necessary for such Approved Third Party Contractors to **[†]** for purposes of **[†]**. Within **[†]** days after **[†]**, Xenon may **[†]** solely for the purpose of **[†]**. The foregoing rights of Xenon shall be subject to Xenon ensuring that any such licenses shall be consistent with and subject to the terms of this Agreement, including without limitation the terms set forth in Subsection 3.9(iii).

For purposes of interpreting the foregoing license grant:

"**Approved Third Party Contractors**" means the following corporations and their successors: (i) **[†]**; (ii) **[†]**; and (iii) **[†]**.

[†].

[†]

5. In the event of a conflict between the terms of this Letter Agreement and the terms of the Agreement, the terms of this Letter Agreement shall prevail.

6. Except as specifically provided above in this Letter Agreement, the Agreement remains in full force and effect, unamended.

Kindly confirm, by signature below, Genentech's agreement on the matters noted above.

With best regards,

/s/ Simon Pimstone
Simon Pimstone
President & CEO
Xenon Pharmaceuticals Inc.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

/s/ Bruce D. Roth
Authorized Signatory
Genentech, Inc.

Name: Bruce D. Roth
Title: VP Chemistry
Date: August 14, 2012.

/s/ Andrew Jefferson
Authorized Signatory
F. Hoffmann-La Roche Ltd.

Name: Andrew Jefferson
Title: Head of Asset Management
Date: August 15, 2012.

/s/ Stefan Arnold
Authorized Signatory
F. Hoffmann-La Roche Ltd.

Name: Stefan Arnold
Title: Head of Legal Pharma
Date: August 15, 2012.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

Genentech
A Member of the Roche Group

31 October 2012

Robin Sherrington, Ph.D
Sr. Vice President, Business & Corporate Development
Xenon Pharmaceuticals Inc.

RE: Second amendment to Collaborative Research and License Agreement between Xenon Pharmaceuticals Inc. ("**Xenon**") and Genentech, Inc. ("**GNE**") together with F. Hoffmann-La-Roche Ltd ("**Roche**") (GNE and Roche, collectively, "**Genentec**h"), made as of December 22, 2011, as amended (the **"Agreement**")

Dear Robin,

Further to our recent discussions and in accordance with Section 16.14 of the Agreement, Xenon and Genentech agree as follows:

1. This amendment to the Agreement shall hereinafter be referred to as the "**Letter Amendment**". Except as specifically defined below, capitalized terms used in this Letter Amendment shall have the same meaning as ascribed to such terms in the Agreement.

2. The definition of "FTE Rate" under Section 1.1 of the Agreement is hereby amended by insertion of the following new sentence at the end of the existing Section 1.1:

> "Notwithstanding the forgoing, the FTE Rate for the **[†]** FTEs (including **[†]** PhDs and **[†]** MSs) that will be assigned to the Research Program as of January 1, 2013 (including any replacement FTE's thereof) shall be (USD) $**[†]** per FTE. These **[†]** FTEs will be assigned to the Research Program at minimum until **[†]**, or as agreed by the Parties."

Except as modified and/or amended herein, all of the terms, covenants and conditions contained in the Agreement shall remain unchanged and in full force and effect. The term "Agreement", as used in the Agreement, and all other instruments and agreements executed thereunder, shall for all purposes refer to the Agreement as amended by this Letter Amendment. This Letter Amendment may be executed in counterpart, each of which shall be deemed to be an original, and such counterparts together shall constitute one instrument. For purposes of executing this Letter Amendment, a facsimile (including a PDF image delivered via email) copy of this Agreement, including the signature pages, will be deemed an original.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

By the signatures below, the parties have caused this Letter Amendment to be executed by their respective duly authorized officers to be effective as of the date set forth above.

Sincerely,

GENENTECH, INC.

By: /s/ Bruce D. Roth
Name: Bruce D. Roth
Title: VP Chemistry

F. HOFFMANN-LA ROCHE LTD

By: /s/ Christophe Carissimo
Name: Christophe Carissimo
Title: Global Licensing Director

By: /s/ Stefan Arnold
Name: Stefan Arnold
Title: Attorney at Law

Acknowledged and Agreed by:

XENON PHARMACEUTICALS INC.

BY: /s/ Simon Pimstone
NAME: Simon Pimstone
TITLE: President and CEO

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

Genentech
A Member of the Roche Group

20 December 2012

Robin Sherrington, Ph.D
Sr. Vice President, Business & Corporate Development
Xenon Pharmaceuticals Inc.

RE: Third amendment to Collaborative Research and License Agreement between Xenon Pharmaceuticals Inc. ("**Xenon**") and Genentech, Inc. ("**GNE**") together with F. Hoffmann-La-Roche Ltd ("**Roche**") (GNE and Roche, collectively, "**Genentec**h"), made as of December 22, 2011, as amended (the **"Agreement**")

Dear Robin,

Further to our recent discussions and in accordance with Section 16.14 of the Agreement, Xenon and Genentech agree as follows:

1. This amendment to the Agreement shall hereinafter be referred to as the "**Letter Amendment**". Except as specifically defined below, capitalized terms used in this Letter Amendment shall have the same meaning as ascribed to such terms in the Agreement.

2. The definition of "FTE Rate" under Section 1.1 of the Agreement is hereby amended by insertion of the following new sentence at the end of the existing Section 1.1:

"Notwithstanding the forgoing, the FTE Rate for **[†]** assigned to the Research Program as of January 1, 2013 (including any replacement FTE's thereof) shall be (USD) $**[†]** per FTE. **[†]** will be assigned to the Research Program at minimum until **[†]**, with an option to extend until **[†]** or as other otherwise agreed by the Parties **[†]** FTE Rate of (USD) $**[†]**."

Except as modified and/or amended herein, all of the terms, covenants and conditions contained in the Agreement shall remain unchanged and in full force and effect. The term "Agreement", as used in the Agreement, and all other instruments and agreements executed thereunder, shall for all purposes refer to the Agreement as amended by this Letter Amendment. This Letter Amendment may be executed in counterpart, each of which shall be deemed to be an original, and such counterparts together shall constitute one instrument. For purposes of executing this Letter Amendment, a facsimile (including a PDF image delivered via email) copy of this Agreement, including the signature pages, will be deemed an original.

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By the signatures below, the parties have caused this Letter Amendment to be executed by their respective duly authorized officers to be effective as of the date set forth above.

Sincerely,

GENENTECH, INC.

By: /s/ Bruce D. Roth
Name: Bruce D. Roth
Title: VP Chemistry

F. HOFFMANN-LA ROCHE LTD

By: /s/ Stefan Arnold
Name: Stefan Arnold
Title: Attorney at Law

By: /s/ Christophe Carrissimo
Name: Christophe Carrissimo
Title: Transaction Excellence

Acknowledged and Agreed by:

XENON PHARMACEUTICALS INC.

BY: /s/ Simon Pimstone
NAME: Simon Pimstone
TITLE: President and CEO

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Exhibit 10.4

XENON PHARMACEUTICALS INC.

and

IVAX INTERNATIONAL GMBH

COLLABORATIVE DEVELOPMENT AND LICENSE AGREEMENT

Effective as of December 7, 2012

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

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COLLABORATIVE DEVELOPMENT AND LICENSE AGREEMENT

This Agreement is made December 7, 2012 (the "**Effective Date**")

BETWEEN:

XENON PHARMACEUTICALS INC., a Canadian corporation having its principal place of business at 3650 Gilmore Way, Burnaby, British Columbia, V5G 4W8 ("**Xenon**")

AND

IVAX INTERNATIONAL GMBH a Swiss limited liability company having its principal place of business at Alpenstrasse 2, 8640 Rapperswil, Switzerland ("**Ivax**")

RECITALS

WHEREAS:

(A) Xenon has proprietary technology and scientific expertise relating to research and development of compounds for the treatment of chronic and acute pain in humans;

(B) Ivax and its Affiliates have expertise in developing, marketing and selling pharmaceutical products; and

(C) Xenon and Ivax wish to collaborate on the clinical development of certain compounds, upon the terms set out in this Agreement, and Ivax and its Affiliates shall further develop, manufacture and sell products containing such compound(s).

WITNESSES THAT, in consideration of the premises and the mutual covenants contained herein, Xenon and Ivax agree as follows:

ARTICLE 1
DEFINITIONS/INTERPRETATION

1.1 Definitions

In this Agreement:

"**Active Pharmaceutical Ingredient**" means, in a pharmaceutical product, a clinically active material that provides pharmacological activity (excluding formulation components such as coatings, stabilizers, excipients or solvents, adjuvants or controlled release technologies).

"**Affected Product**" has the meaning set out in Section 8.3(a)(i).

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"**Affiliate**" means, with respect to any Party, any Person, organization or entity which directly or indirectly controls, is controlled by, or is under common control with such Party. For purposes of this definition only, "**control**" and, with correlative meanings, the terms "controlled by" and "under common control with" of another Person, organization or entity will mean the ability, directly or indirectly, to direct the activities of the relevant entity, including:

(i) ownership or control of more than fifty percent (50%) of the outstanding voting or other ownership interest of the other organization or entity; or

(ii) direct or indirect possession of the power to elect or appoint more than fifty percent (50%) of the members of the governing body of the organization or other entity;

PROVIDED that in the case of jurisdictions in which the maximum percentage ownership permitted by law for a foreign investor is less than fifty percent (50%), such lower percentage shall be substituted in the preceding sentence if such foreign investor has the power to direct the management and policies of such entity. Neither of the Parties to this Agreement shall be deemed to be an "Affiliate" of the other solely as a result of their entering into this Agreement.

"**Agreement**" means this Agreement, including the Schedules hereto and any written agreement, document or instrument entered into, made or delivered pursuant to the terms hereof, and as any of them may from time to time be supplemented or amended.

"**Alliance Manager**" has the meaning given to that term in Section 3.1.

"**Annual Plan**" has the meaning set out in Section 3.6.

"**Applicable Law**" means all applicable laws, rules, regulations, guidelines and policies that apply to the performance of either Party's obligations relating to this Agreement that may be in effect from time to time (including disclosure obligations as required by any stock exchange or securities commission having authority over a Party, and any applicable rules, guidelines or other requirements of a Regulatory Authority) to the extent applicable to such Party.

"**Arbitration**" has the meaning set out in Section 8.5.

"**BIA**" means the Bankruptcy and Insolvency Act (Canada).

"**Books and Records**" means, in whatever media, all books and records, documents, reports and accounts in connection with or relating to any research activities pursuant to this Agreement in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes including to obtain Regulatory Approvals, and which shall be complete and accurate and shall fully and properly reflect all material work done and results achieved in the performance of the activities hereunder and which shall be retained as may be required by Applicable Law (provided that any such materials that relate to any Patent Rights shall be retained for the life of such rights plus five (5) years); as well as any other books and records as may be required from time to time by Applicable Law or this Agreement.

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"**Business Day**" means any day other than (i) a Friday or Saturday for Ivax, (ii) a Saturday or Sunday for Xenon or (iii) a commercial holiday in either Vancouver, British Columbia, Toronto, Ontario, New York, NY or Tel Aviv, Israel, or (iv) such other day when the general operations of a Party are closed.

"**Calendar Quarter**" means each successive period of three calendar months ending on each of March 31, June 30, September 30, and December 31.

"**Ceases Development**" or "**Ceased Development**" means [†].

"**CCAA**" means the *Companies' Creditors Arrangement Act* (Canada).

"**CFR**" means the US Code of Federal Regulations.

"**Change of Control Event**" has the meaning set out in Section 16.1(b).

"Clinical Trial" means a Phase I Clinical Trial, Phase II Clinical Trial, Phase III Clinical Trial or Phase IV Clinical Trial.

"**Collaborative Development Plan**" means the written plan setting forth in reasonable detail the Development activities to be conducted by or on behalf of Ivax and/or Xenon and/or their respective Affiliates pursuant to this Agreement as further described in Section 3.2(a)(i), which plan shall assign responsibility for such Development activities between the Parties. An Initial Summary Collaborative Development Plan is attached as Schedule C hereto.

"**Collaborative Development Program**" means the Development activities to be conducted by the Parties over the course of the Collaborative Development Term, as set out in Section 3.2(a)(i) herein and in the Collaborative Development Plan.

"**Collaborative Development Term**" means the term of the Collaborative Development Program described in Section 2.4.

"**Collaboration IP**" means any Intellectual Property conceived, identified, or first made by Xenon or Ivax (each either alone, jointly, or with their Affiliates or Third Parties): (i) [†]; or (ii) [†].

"**Collaboration Patent Rights**" means all Patent Rights under Collaboration IP, including Joint Patent Rights.

"**Combination Product**" means a single Product in final form containing (i) one or more of XEN402 or XEN403 as Active Pharmaceutical Ingredient(s), and (ii) one or more other Active Pharmaceutical Ingredient(s).

[†].

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"**Commercialization**" or "**Commercialize**" means any activities, including pre-launch activities, directed to preparation for sale of, offering for sale of, or sale of a Product, including activities related to marketing, advertising, promoting, detailing, distributing, importing, exporting such Product, conducting Phase IV Clinical Trials, and interacting with Regulatory Authorities regarding the foregoing.

"**Confidential Information**" means all non-public proprietary Intellectual Property or other non-public information (whether or not patentable) regarding a Party's or its Affiliates' research, Development, Manufacturing and Commercialization activities and such Party's and its Affiliates' technology, products, business information and objectives, which is designated as confidential by the disclosing Party prior to or at the time any such Intellectual Property or other information is disclosed by the disclosing Party to the other Party. Notwithstanding the foregoing, Intellectual Property or other non-public information that is orally, electronically or visually disclosed by a Party without a written designation of confidentiality shall constitute Confidential Information of a Party: (i) if the disclosing Party, within thirty (30) days after such disclosure, delivers to the other Party a written document summarizing the Intellectual Property or other information, designating the same as confidential, or (ii) if such information is of the type that is customarily considered to be confidential information by Persons engaged in activities that are substantially similar to the activities being engaged in by the Parties. Confidential Information does not include information that (i) was known or used by the receiving Party prior to its date of disclosure to the receiving Party, as demonstrated by legally admissible evidence available to the receiving Party; (ii) either before or after the date of the disclosure to the receiving Party is lawfully disclosed to the receiving Party by sources (other than the disclosing Party) rightfully in possession of the Confidential Information and not bound by confidentiality obligations to the disclosing Party; (iii) either before or after the date of the disclosure to the receiving Party becomes published or generally known to the public through no fault or omission on the part of the receiving Party; or (iv) is independently developed by or for the receiving Party without access to, reference to or reliance upon the Confidential Information, as demonstrated by competent written records. Notwithstanding the foregoing, any technical or business information of a Party or its Affiliates disclosed at a meeting of the JDC or PDC shall constitute Confidential Information of a Party unless otherwise specified in writing.

"**Consumer Price Index**" means the Consumer Price Index – All-items, applicable to Vancouver, British Columbia, as published by Statistics Canada, or if such Index is no longer published, then the Index most comparable thereto.

"**Control**" or "**Controlled**" means, with respect to any Intellectual Property, the possession (whether by license, other than pursuant to this Agreement, or ownership) by a Party or its Affiliates of the right to grant to the other Party access, a license, sublicense, or other right as provided herein (including the right to reference an NDA Filing) without violating the terms of any agreement or other arrangement, existing before, on, or after the Effective Date with any Third Party. Notwithstanding anything to the contrary under this Agreement, with respect to any Third Party that later becomes an Affiliate of a Party after the Effective Date (including a Third Party acquirer), no Intellectual Property of such Third Party will be included in the licenses granted hereunder by virtue of such Third Party becoming an Affiliate of such Party.

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"**Covering**", "**Cover**", or "**Covered**" means, with respect to a Patent Right, that, **[†]**.

"**Decision Point**" has the meaning set out in Section 12.3(b).

"**Development**" or "**Develop**" means the conduct of all research, formulating, preclinical and other testing, nonclinical activities, Clinical Trials and other studies, and all other activities (including test method development, stability testing, toxicology studies, process development, statistical analysis and report writing, packaging, labelling and regulatory affairs, product approval and registration activities) necessary, desirable, or reasonably useful or otherwise requested or required by a Regulatory Authority as a condition or in support of obtaining and maintaining Regulatory Approval. For clarity, Development excludes Phase IV Clinical Trials.

"**Development Milestone Event**" has the meaning set out in Section 7.2.

"**Diagnostic Product**" means an assay, test, test kit or service used solely for the purpose of Developing or Commercializing Products that is Covered by a Valid Claim of the Xenon Background Patent Rights in the Territory.

"**Diligent Efforts**" means:

(a) In respect of Ivax, efforts and resources devoted to [†].

(b) In respect of Xenon, efforts and resources devoted to [†].

(c) **[†]**.

"**Disclosure**" has the meaning set out in Section 11.4.

"**Effective Date**" has the meaning set out at the beginning of this Agreement.

"EMA" means the European Medicines Agency or any successor entity thereto.

"**EU**" means the European Union, or any country within the European Union, as it is constituted as of the Effective Date.

"FDA" means the US Food and Drug Administration and any successor agency thereto.

"**Field**" means all human and non-human indications.

"**First Commercial Sale**" means, with respect to a Product, the first bona fide sale of such Product to a Third Party by or on behalf of Ivax or its Affiliates or Sublicensees for monetary value, for use or consumption by the end user of such Product, in a country in the Territory after Regulatory Approval has been achieved for such Product in such country. For greater certainty, sales for test marketing, sampling and promotional uses, Clinical Trial purposes or compassionate or similar use shall not be considered to constitute a First Commercial Sale.

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"**FTE**" means the equivalent of one full-time employee's work time over a twelve (12) month period (including vacations, sick days and holidays applicable to each Party but in no event less than [†]) related directly to activities under the Collaboration Development Program. The portion of an FTE year devoted by an employee to the Collaborative Development Program shall be determined by dividing the number of full days during any twelve (12) month period devoted by such employee to the Collaborative Development Program by the total number of working days during such twelve (12) month period.

"**FTE Rate**" shall mean the amount Ivax will pay to Xenon over a consecutive twelve (12) month period during the Collaborative Development Term to support one (1) Xenon FTE dedicated to the Collaborative Development Plan. The FTE Rate shall be $[†] per FTE.

"**Full Royalty**" has the meaning set out in Section 8.1.

"**GCP**" means, at any time, the then current Good Clinical Practices as such term is defined from time to time by the FDA, or comparable standards or requirements of other relevant Regulatory Authority within the Territory.

"**Generic Product**" has the meaning set out in Section 8.3(a).

"**IND**" means an Investigational New Drug application, as described in 21 CFR § 312.23, filed for purposes of conducting Clinical Trials on a Product in accordance with the requirements of the United States Food, Drug, and Cosmetic Act of 1938, as amended, and the regulations promulgated thereunder, including all supplements and amendments thereto, and any analogous application and process required by a Regulatory Authority in a country or regulatory jurisdiction elsewhere in the Territory in order to conduct Clinical Trials on a Product in such country.

"Indication" means a specific disease for which an NDA Approval has been received. By way of example, the following are each an Indication: erythromelagia, [†]. For clarity, broad pain states such as neuropathic pain, inflammatory pain or severe pain are each comprised of multiple Indications.

"**Insolvency Laws**" shall mean any of the BIA, the CCAA, the *Winding-Up and Restructuring Act* (Canada), and any other applicable similar federal, provincial, or foreign law (including common law or equity) of any jurisdiction (including any law of any jurisdiction permitting a debtor to obtain a stay or a compromise of the claims of its creditors against it) now or hereafter in effect relating to bankruptcy, insolvency, receivership, liquidation, dissolution, winding-up, restructuring or reorganization of debtors (including any applicable corporations legislation), compromise, arrangement, adjustment, protection, moratorium, relief, stay of proceedings of creditors generally (or any class of creditors), or composition of any debtor or its indebtedness.

"**Insolvency Proceeding**" means any of the following, undertaken under Insolvency Laws or otherwise: (a) any case, action, application, petition, or other proceeding before any governmental authority or otherwise (i) relating to bankruptcy, insolvency, receivership,

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liquidation, dissolution, winding-up, restructuring or reorganization of debtors (including under any applicable corporations legislation), compromise, arrangement, adjustment, protection, moratorium, relief, stay of proceedings of creditors generally (or any class of creditors), or composition of any debtor or its indebtedness, or the filing of any notice in respect of the foregoing, or (ii) applying for or seeking the entry of an order for the appointment of, or the taking of possession by, a receiver, interim receiver, receiver/manager, sequestrator, conservator, custodian, administrator, trustee, liquidator or other similar official for any debtor or any substantial part of its assets, or (b) any general assignment for the benefit of creditors, scheme of compromise or arrangement, formal or informal moratoria, compositions, extensions, marshaling of assets for creditors, or other similar arrangement in respect of its creditors generally or any substantial portion of its creditors including the filing of any notice of intent to file a proposal.

"**Intellectual Property**" means Patent Rights, Know-How, trade names, trademarks, copyright, trade dress, industrial and other designs, and all other forms of intellectual property, all whether or not registered, capable of registration, published or unpublished.

"**Invalidity Claim**" has the meaning set out in Section 10.5(f).

"**Ivax Background IP**" means:

(i) Ivax Background Know-How; and

(ii) Ivax Background Patent Rights.

"**Ivax Background Know-How**" means all Know-How that: (i) is Controlled by Ivax or its Affiliates as of the Effective Date; (ii) is not generally known; and (iii) is necessary for Xenon to conduct Development activities pursuant to the Collaborative Development Program as set forth in the Collaborative Development Plan including any amendments to the Collaborative Development Plan made by the JDC in accordance with the terms set forth herein.

"**Ivax Background Patent Rights**" means all Patent Rights Controlled by Ivax or its Affiliates as of the Effective Date that are necessary for Xenon to conduct Development activities pursuant to the Collaborative Development Program as set forth in the Collaborative Development Plan including any amendments to the Collaborative Development Plan made by the JDC in accordance with the terms set forth herein. All such Ivax Background Patent Rights are set out in Schedule D.

"**Ivax Co-Promotion IP**" means (i) all Patent Rights Controlled by Ivax or its Affiliates that are necessary for Xenon to conduct the activities set out in Schedule F respecting Products to which Xenon has exercised the Xenon Co-Promote Option; and (ii) all Know-How of Ivax or its Affiliates that is necessary for Xenon to perform the activities set out in Schedule F respecting such Products to which Xenon has exercised the Xenon Co-Promote Option.

"**Ivax Indemnified Parties**" has the meaning set out in Section 15.2.

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"**Ivax Termination IP**" means:

(a) [†]; and

(b) [†].

"**Joint Collaboration IP**" has the meaning set out in Section 10.1(b)(iii).

"**JDC**" or "**Joint Development Committee**" has the meaning set out in Section 3.2(a).

"**Joint Patent Rights**" has the meaning set out in Section 10.1(b)(iii).

"**Know-How**" means any know-how, inventions, discoveries, trade secrets, information, data and materials including ideas, concepts, formulas, methods, assays, practices, processes, software, devices, techniques, procedures, designs, compositions, constructs, compounds, plans, applications, research, preclinical and clinical data, regulatory information, manufacturing process, scale-up and other technical data, reports, documentation and samples, including: biological, chemical, pharmacological, toxicological, pharmaceutical, physical and analytical, pre-clinical, clinical, safety, manufacturing and quality control data and information, including study designs and protocols; assays and biological methodology. Know-How excludes Patent Right(s).

"**Know-How Royalty**" has the meaning set out in Section 8.2(a).

"**Major Market**" means each of the United States, the United Kingdom, Germany, France, Spain, and Italy.

"**Manufacture**" or "**Manufacturing**" means all activities associated with the production, manufacture, processing, filling, finishing, packaging, labeling, shipping and holding, as applicable, for research, Development or Commercialization, as the case may be, including process development, process qualification and validation, manufacturing scale-up, pre-clinical, clinical and commercial manufacture and analytic development, quality stability testing, impurity characterization, assurance and quality control.

"**Market Protected Product**" means a Product to which, under Applicable Law, data exclusivity protection and/or market exclusivity protection has been afforded and is in effect, including:

(a) Market exclusivity respecting introduction of a new chemical entity (NCE) to the market, as provided under the *US Hatch-Waxman Act* (1984) as amended;

(b) Market exclusivity respecting introduction of an orphan drug to the market, as provided under the *US Orphan Drug Act* (1983) as amended;

(c) Market exclusivity respecting introduction of a pediatric drug to the market, as provided under the *US Best Pharmaceuticals for Children Act* (2002) as amended;

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(d) Data exclusivity and/or market exclusivity for a new drug, including any extensions thereto, each pursuant to the EU Data Exclusivity *Regulation (EC) No. 726/2004* as amended;

(e) Market exclusivity respecting introduction of an orphan drug to the market pursuant to the EU Orphan Drug *Regulation (EC) No 141/2000* as amended; and

(f) Market exclusivity respecting introduction of a pediatric drug to the market pursuant to the EU Regulation (EC) No 1901/2006 (Paediatric Regulation), including data exclusivity and/or marketing exclusivity under the Paediatric Use Marketing Authorization (PUMA),

and any other similar legislation or regulations to the above, and any successor legislation or regulations relating thereto, in any jurisdiction in the Territory.

"**Milestone Event**" means a Development Milestone Event or Sales Milestone Event, as the case may be.

"**Milestone Payments**" means each of the payments described in Sections 7.2 and 7.3.

"**NDA**" or "**New Drug Application**" means an application submitted to a Regulatory Authority in any jurisdiction seeking approval to market and sell a Product, including a United States New Drug Application filed with the FDA pursuant to 21 CFR § 314.50 of the US *Food, Drug and Cosmetic Act*, or any application in any country corresponding to a United States New Drug Application, and all additions, supplements, extensions and amendments thereto.

"**NDA Approval**" means approval by a Regulatory Authority of an NDA.

"**NDA Filing**" means the filing with the applicable Regulatory Authority of a New Drug Application for a Product, and all additions, supplements, extensions, and amendments thereto.

"**Net Sales**" means the gross amount invoiced or otherwise charged by or on behalf of Ivax or any of its Affiliates or Sublicencees, for the sale of any Products sold to Third Parties, less the following deductions [†], each to the extent actually allowed or incurred based on such sale, [†]:

(i) [†];

(ii) [†];

(iii) [†];

(iv) [†];

(v) [†];

(vi) [†];

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(vii) [†];

(viii) [†];

(ix) tariffs, duties, excise, sales, value-added and other similar taxes (other than income taxes, franchise taxes or like taxes); and

(x) all freight, postage and insurance included in the invoice price;

PROVIDED that:

(xi) any of the items set forth above that would otherwise be deducted from the invoice price in the calculation of Net Sales but which are separately charged to Third Parties shall not be deducted from the invoice price in the calculation of Net Sales.

"**Party**" means Ivax or Xenon;

"**Parties**" means Ivax and Xenon.

"**Patent Prosecution**" has the meaning set out in Section 10.3(a).

"**Patent Rights**" means (i) any national, regional and international patents and patent applications, including provisional patent applications, (ii) any patent applications filed either from such patents, patent applications or provisional applications or from an application claiming priority from either of these, including divisionals, continuations, continuations-in-part, provisionals, converted provisionals and continued prosecution applications, (iii) any and all patents that have issued or in the future issue from the foregoing patent applications ((i) and (ii)), including utility models, petty patents and design patents and certificates of invention), and (iv) any and all extensions or restorations by existing or future extension or restoration mechanisms, including revalidations, reissues, extensions, substitutions, re-examinations, renewals, supplemental protection certificates and the like, pipeline patents, patents of importation, revalidation, confirmation or introduction patents or registration patents or patents of addition to any of the foregoing patents or patent applications ((i), (ii), and (iii)), and (v) any similar rights, including so-called pipeline protection or any importation, revalidation, confirmation or introduction patent or registration patent or patent of additions to any of such foregoing patent applications and patents.

"**PDC**" or "**Product Development Committee**" has the meaning set out in Section 3.2(d).

"**Person**" means any individual, sole proprietorship, partnership, corporation, limited liability company, joint stock company, unincorporated association, trust or any other entity that has legal capacity to own property in their own name or to sue or be sued, including a government or political subdivision, department or agency of a government.

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"**Phase I Clinical Trial**" means the initial clinical testing of a Product in humans (first-in-humans study) with the intention of gaining a preliminary assessment of the safety of such Product or any similar clinical testing prescribed by the Regulatory Authorities, including the trials referred to in 21 CFR § 312.21(a), as amended.

"**Phase II Clinical Trial**" means a human clinical trial of a Product conducted in any country that is intended to explore a variety of doses, dose response and/or duration of effect to generate evidence of clinical safety and activity in a target patient population, that would satisfy the requirements of 21 CFR § 312.21(b), or an equivalent clinical trial as required by a Regulatory Authority outside of the United States.

"**Phase III Clinical Trial**" means a human clinical trial of a Product on a sufficient number of subjects that is designed to establish that the Product is safe and efficacious for its intended use, and to determine warnings, precautions and adverse reactions that are associated with such Product in the dosage range to be prescribed, which trial is intended to support marketing approval by the FDA under the US *Food, Drug, and Cosmetic Act*, or a similar Regulatory Authority in a jurisdiction outside of the United States.

"**Phase IV Clinical Trial**" means a post-marketing human clinical trial for a Product commenced after receipt of Regulatory Approval in the country for which such trial is being conducted and that is conducted within the parameters of the Regulatory Approval for the Product. Phase IV Clinical Trials may include, without limitation, epidemiological studies, modeling and pharmacoeconomic studies, investigator-sponsored clinical trials of Product and post-marketing surveillance studies.

"**Product**" means (i) any pharmaceutical product that contains XEN402 as an Active Pharmaceutical Ingredient, or (ii) any pharmaceutical product that contains XEN403 as an Active Pharmaceutical Ingredient. For clarity, all references to a Product in this Agreement shall include a Combination Product.

"**Project Leader**" means the representative designated by each Party pursuant to Section 3.2(b) who will have responsibility for overseeing the day-to-day activities of such Party with respect to the Collaborative Development Plan and for being the primary point of contact between the Parties with respect to the Collaborative Development Program.

"**Reduced Royalty**" has the meaning set out in Section 8.3(a).

"**Regulations**" means regulations, statutes, rules, guidelines and procedures promulgated by a Regulatory Authority pursuant to Applicable Law.

"**Regulatory Approval**" means, with respect to any country, any and all approvals (including any applicable governmental price and reimbursement approvals), licenses, registrations, or authorizations of any Regulatory Authority necessary for the Manufacture, use, storage, import, transport, Commercialization and commercial sale (including packaging and labelling) of a product for human use in a country, including approvals of biologics license applications, NDA Filings and product license applications (and their respective foreign counterparts).

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"**Regulatory Authority**" means any federal, national, multinational, regional, state, provincial or local regulatory agency, department, bureau, commission, council or other governmental entity with authority to grant a Regulatory Approval or having jurisdiction over the Manufacture, Development, or Commercialization of a Product in the Territory.

"**Regulatory Documents**" has the meaning set out in Section 4.1(b).

"**Regulatory Document Transfer Date**" has the meaning set out in Section 4.1(b).

"**Royalty**" means a Full Royalty, Know-How Royalty or Reduced Royalty, as the case may be.

"**Royalty Payment**" means a royalty payment required to be paid pursuant to ARTICLE 8.

"**Royalty Reduction Terms**" has the meaning set out in Section 12.5(c).

"**Royalty Term**" means, in respect of each Product , unless earlier terminated pursuant to the provisions of ARTICLE 12, on a country-by-country basis within the Territory, the period commencing on the date of the First Commercial Sale of the Product in that country and ending on the later of:

(i) the expiration of the last to expire of the Valid Claims of the applicable [†] Patent Rights Covering such Product in such country;

(ii) the date upon which such Product, to the extent previously considered a Market Protected Product, loses the data or market exclusivity that had been afforded it; or

(iii) the tenth (10^{th}) anniversary of such First Commercial Sale of a Product in that country.

"**Safety Signal**" means, in respect to a Product, either of the following events occurring during a Clinical Trial of such Product:

(i) [†];

(ii) [†]:

(A) [†] and

(B) [†],

[†];

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(iii) [†]; or

(iv) [†].

By way of example respecting (ii) above, [†].

"**Sales Milestone Event**" has the meaning given to that term in Section 7.3.

"**Sublicense**" means (i) a sublicense granted pursuant to, and in accordance with, the provisions of Section 9.3, and (ii) any other agreement between Ivax or its Affiliates and a Third Party, where such agreement does not require a sublicense under Xenon Background IP, but where Xenon is entitled to Milestone Payments or Royalty Payments under this Agreement.

"**Sublicensee**" means a Person to whom a Sublicense is granted by Ivax or its Affiliates.

"**Substances**" has the meaning given to that term in Section 4.6.

"**Successor Entity**" of a Party means such Party's successor in interest.

[†].

[†].

[†].

[†].

[†].

"**Term**" means the term of this Agreement as set out in Section 12.1.

"**Territory**" means (i) for XEN402 all of the countries of the world, excluding [†]; (ii) [†]; (iii) [†]; or (ii) for Diagnostic Products, all of the countries of the world.

"**Third Party**" means any Person other than Ivax, Xenon, and their respective Affiliates.

"**Third Party Claim**" has the meaning set out in Section 10.6.

"**True-Up**" has the meaning set out in Section 8.8(c).

"**US**" means the United States of America (including all possessions and territories thereof, including Puerto Rico).

"**Valid Claim**" means a claim:

(a) of any issued, unexpired patent whose validity, enforceability, or patentability has not been affected by any of the following:

(i) a holding, finding, or decision of invalidity, unenforceability, or non-patentability by a court, governmental agency, national or regional patent office, or other appropriate body that has competent jurisdiction, such holding, finding, or decision being final and from which no appeal can be taken, or with respect to which an appeal is not taken within the time allowed for appeal, or

(ii) disclaimer, irretrievable lapse, abandonment, revocation, dedication to the public, denial or admission of invalidity or unenforceability through reissue, disclaimer or otherwise, or

(b) of any patent application which has not been cancelled, abandoned, withdrawn from consideration, finally determined to be unallowable (from which no appeal is or can be taken), or abandoned or disclaimed; PROVIDED that [†] (i) [†], or (ii) [†].

For avoidance of doubt, any patent respecting which a supplemental protection certificate has been granted shall be deemed to be a patent for purposes of this definition.

"**XEN402**" means that certain synthetic small molecule chemical compound described in Schedule A and the Xenon PCT Publ. No. [†], and all forms thereof.

[†]

"**XEN403**" means that certain synthetic small molecule chemical compound described in Schedule B and the Xenon PCT Publ. Nos. [†] and [†], and all forms thereof.

"**Xenon Background IP**" means:

(i) Xenon Background Know-How; and

(ii) Xenon Background Patent Rights.

"**Xenon Background Know-How**" means all Know-How that: (i) is Controlled by Xenon as of the Effective Date; (ii) is not generally known; and (iii) is necessary for the work to be undertaken by Ivax pursuant to the Collaborative Development Plan and/or is necessary to research, Develop, Manufacture, have Manufactured, market, make, use, sell, offer for sale, export and import for sale, or otherwise Commercialize Products or Diagnostic Products in the Territory.

"**Xenon Background Patent Rights**" means all Patent Rights Controlled by Xenon as of the Effective Date that are necessary to research, Develop, Manufacture, have Manufactured, market, make, use, sell, offer for sale, export and import for sale, or otherwise Commercialize Products or Diagnostic Products in the Territory.

"**Xenon Co-Promote Option**" has the meaning set out in Section 6.3.

"**Xenon Indemnified Parties**" has the meaning set out in Section 15.1.

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"**Xenon Prosecution Notice**" has the meaning set out in Section 10.3(c).

"**Year**" means a period of one year beginning on January 1 and ending on (and including) December 31 of that year.

1.2 Interpretation

(a) Headings in this Agreement are solely for the convenience of reference and shall not be used for purposes of interpreting or construing the provisions hereof.

(b) All references in this Agreement to a designated "Article", "Section", "Subsection" or other subdivision or to a Schedule are to the designated Article, Section, Subsection or other subdivision of, or Schedule to, this Agreement.

(c) The words "herein", "hereof" and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular Article, Section, Subsection or other subdivision or Schedule.

(d) The word "including", when following any general statement, term or matter, is not to be construed to limit such general statement, term or matter to the specific items or matters set forth immediately following such word or to similar items or matters, whether or not non-limiting language (such as "without limitation" or "but not limited to" or words of similar import) is used with reference thereto, but rather is to be construed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement, term or matter.

(e) All references to currency, dollar or $ are deemed to mean lawful money of the US.

(f) Any reference to a statute includes and is a reference to such statute and to the regulations made pursuant thereto, with all amendments made thereto and in force from time to time, and to any statute or regulations that may be passed which has the effect of supplementing or superseding such statute or such regulations.

(g) Words imparting the masculine gender include the feminine or neuter gender and words in the singular include the plural and vice versa.

(h) This Agreement has been prepared jointly by the Parties, each having access to legal counsel of its choice, and shall not be strictly construed or interpreted in favour of or against either Party.

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ARTICLE 2
COLLABORATIVE DEVELOPMENT PROGRAM

2.1 General

Each Party shall carry out its obligations under the Collaborative Development Program pursuant to the provisions of this Agreement. The Collaborative Development Program will be conducted as a unified, collaborative effort with the Parties' activities carried out primarily at each Party's respective facilities.

2.2 Collaborative Development Program Costs

Except as otherwise expressly provided in this Agreement, Ivax shall bear all costs of the Parties' obligations as set forth under the Collaborative Development Program. For avoidance of doubt, Ivax shall also be responsible for payment of (or reimbursement to Xenon, as applicable), of any costs and expenses relating to approved subcontractors as set out under Section 3.7.

2.3 Amendments to the Collaborative Development Plan

The JDC may amend the Collaborative Development Plan from time to time in accordance with Section 2.4, Section 2.5, and ARTICLE 3. In the event of a conflict between the terms of this Agreement including the terms of the Initial Summary Collaborative Development Plan attached as Schedule C hereto, and the Collaborative Development Plan, the terms of this Agreement shall govern.

2.4 Collaborative Development Term

Except as otherwise provided herein, the term of the Collaborative Development Program shall commence on the Effective Date and continue for [†] years unless the JDC extends such term beyond the initial [†] years. The JDC may extend the term of the Collaborative Development Program on a year-by-year basis, by notice to Xenon, initially at least ninety (90) days prior to the [†] anniversary of the Effective Date and, thereafter, at least ninety (90) days prior to each subsequent anniversary of the Effective Date, and the Parties shall, in such case, amend the Collaborative Development Plan as necessary.

2.5 Xenon FTE Funding

(a) For the first year of the Collaborative Development Term, and for such further time period (if any) as the JDC may determine, Ivax shall fund, on a Calendar Quarter basis (pro-rated for any period of less than three (3) months at the beginning or end of the Collaborative Development Term), in advance, as set out in the Initial Summary Collaborative Development Plan attached as Schedule C, a minimum number of FTEs of Xenon, each at the FTE Rate;

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(b) Notwithstanding anything to the contrary herein, (i) such minimum number of Xenon FTEs will remain unchanged for the duration of the first year of the Collaborative Development Term; and (ii) with regard to the Collaborative Development Plan for the second and/or subsequent years of the Collaborative Development Term, if the JDC desires to decrease such minimum number of Xenon FTEs funded by Ivax, the JDC will provide Xenon with at least [†] months prior written notice (for clarity, such notice can be provided to Xenon at any time after the Effective Date); and

(c) In the event that the JDC extends the Collaborative Development Term beyond the initial term of [†] years, if the extended Collaborative Development Plan contemplates further work by Xenon FTEs, the FTE Rate will be increased by a percentage equal to the percentage increase in the Consumer Price Index from the beginning of the Collaborative Development Term, and for each year thereafter that the Collaborative Development Term is extended, the FTE Rate will be increased by a percentage equal to the percentage increase in the Consumer Price Index from the commencement of the prior year of the Collaborative Development Term.

2.6 FTE Records

Xenon shall keep complete and accurate records of its FTE's work time (including vacations, sick days and holidays) attributed to the Collaborative Development Program and Ivax shall be entitled from time to time, but not more than once each Year during the Collaborative Development Term, and only once with respect to records covering any specific period of time, to review such records at its expense in the location where such records are maintained upon reasonable notice and during regular business hours and under obligations of strict confidence, for the sole purpose of verifying the FTEs work time attributed to the Collaborative Development Program.

2.7 Conduct of Collaborative Development Program

(a) Each Party shall use Diligent Efforts to perform its obligations pursuant to the Collaborative Development Program.

(b) Each Party shall conduct the Collaborative Development Program in compliance with all Applicable Law, including GCP. Each Party shall notify the other Party in writing of any deviations from Applicable Law or Regulations, if applicable.

(c) Each Party hereby agrees that neither it nor any of its Affiliates shall employ or otherwise use in any capacity, the services of any person debarred under US law, including 12 U.S.C. 335(a) or (b) or 21 U.S.C. 335a, in performing any portion of the Collaborative Development Program.

(d) Each Party shall be entitled to utilize the services of its Affiliates to perform its activities under the Collaborative Development Plan, PROVIDED that each Party shall remain at all times fully liable for its responsibilities under the Collaborative

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Development Program (whether performed by itself or its Affiliates) and shall only use the services of an Affiliate if such Affiliate has entered into an agreement whereunder the Affiliate has agreed to be bound by terms consistent with the provisions of this Agreement

(e) While Ivax shall be entitled to utilize the services of Third Parties to perform such Collaborative Development Program activities at its sole discretion provided that such Third Party has entered into an agreement that contains provisions, as applicable, regarding Intellectual Property, Disclosure, and Confidential Information that comply with the provisions of this Agreement, Xenon shall not be entitled to utilize the services of Third Parties to perform such Collaborative Development Plan activities except in accordance with Section 3.7 below.

ARTICLE 3
JOINT DEVELOPMENT COMMITTEE & PRODUCT DEVELOPMENT COMMITTEE

3.1 Alliance Managers

Within thirty (30) days following the Effective Date, each Party will appoint (and notify the other Party of the identity of) a senior representative having a general understanding of pharmaceutical research, Development and Commercialization issues to act as its alliance manager under this Agreement ("**Alliance Manager**"). The Alliance Managers will serve as the primary business contact point between the Parties for the purpose of providing Xenon with information on the progress of Ivax's Development and Commercialization of the Products and will be primarily responsible for facilitating the flow of information and otherwise promoting communication, coordination and collaboration between the Parties; providing single point communication for seeking consensus both internally within the respective Party's organization and together regarding key global strategy and planning issues, as appropriate, including facilitating review of external corporate communications; and raising cross-Party and/or cross-functional disputes in a timely manner. Each Party may replace its Alliance Manager, either with respect to certain matters and/or for all purposes under this Agreement, by providing prior written advisory (including via e-mail) to the Alliance Manager of the other Party.

3.2 Joint Development Committee and Product Development Committee

(a) Within thirty (30) days following the Effective Date, the Parties shall establish a Joint Development Committee (the "**JDC**") which shall have responsibility to manage, direct and oversee all Development activities relating to the Products, including those activities set out under the Collaborative Development Plan and as set out below:

(i) As soon as practicable after the establishment of the JDC and no later than [†] following the Effective Date, preparing and finalizing a detailed Collaborative Development Plan, based upon and consistent with the Initial Summary of such Collaborative Development Plan set out in Schedule C. Such initial detailed Collaborative Development Plan will include:

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- A detailed overview and timetable for each Party's planned activities under the Collaborative Development Program for the 1st year of the Collaborative Development Term;
- A general overview and timetable for each Party's planned activities under the Collaborative Development Program for the [†] years of the Collaborative Development Term;
- Specific activities and timetable goals respecting Ivax's completion of one or more Phase II Clinical Trials and/or Phase III Clinical Trials in erythromelalgia.
- [†]
- The number of FTEs to be provided by Xenon, subject to Section 2.5;
- Provisions to deal with Manufacturing of Compounds by Ivax for Development activities; and
- An allocation of responsibilities of each of the Parties for the activities pursuant to the Collaborative Development Plan.

(ii) Manage, direct and oversee all activities under the Collaborative Development Plan;

(iii) Select the indication(s) and formulation(s) for each Product in Development;

(iv) If and as applicable, revising and updating the Collaborative Development Plan in a timely manner and circulating a copy of each revised or updated version to the Alliance Managers;

(v) Monitoring progress of the Collaborative Development Plan including monitoring the Parties' compliance with their respective obligations under same, including the accomplishment of key objectives, the devotion of the required number of FTEs, and the disclosure of Collaboration IP;

(vi) Circulate to each representative of the JDC and to each Alliance Manager, at least once per Calendar Quarter, a summary report (in such form and format as determined by the JDC) of each Party's Collaborative Development Program activities; and

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(vii) Such other activities as set forth in the Collaborative Development Plan or this Agreement, or as agreed by the Parties from time to time.

(b) The JDC shall be comprised of an equal number of representatives of each Party with expertise appropriate for the function and purpose of the JDC, but in no event will the membership of the JDC exceed three (3) representatives of each Party. Each Party will designate one of its representatives as its Project Leader, and may replace its representatives on the JDC from time to time in its discretion with prior written notice to the other Party.

(c) The Chair of the JDC shall be appointed by Ivax.

(d) The JDC shall continue and have the responsibilities relating to each Product referenced in the Collaborative Development Plan, up to the date of expiration of the Collaborative Development Term, at which time the JDC shall be dissolved.

(e) As of the date of dissolution of the JDC, the Parties will form and convene a Product Development Committee ("**PDC**") in a form reasonably analogous to the JDC, including Section 3.4, to maintain information flow between Xenon and Ivax with respect to any active Development of Products. The PDC shall meet every [†] months, either in person, by audio or by video conference. The PDC shall continue and have the responsibilities (as applicable) set out under Section 3.6 and Section 6.2(a), up to the date that the first NDA Approval is received for each such Product. The PDC will be dissolved as of the date that all Products in Development have received a first NDA Approval.

3.3 Governance of JDC

(a) JDC meetings may be held in-person, by audio or by video conference. The JDC shall hold an initial in-person meeting within thirty (30) days of the Effective Date, at a location to be agreed by the representatives of the JDC. Thereafter, the JDC shall meet at least once per Calendar Quarter, with in-person meetings occurring [†].

(b) Unless otherwise agreed by the Parties, the location of in-person meetings shall alternate between the locations of the Parties, with the first meeting to be held at a location to be agreed by the Parties.

(c) Each Party shall use all reasonable efforts to cause its JDC representatives to attend the meetings, and if a Party's representative is unable to attend a meeting, such Party shall designate an alternate representative to attend in place of the absent representative.

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(d) Each Party may, in its discretion, invite additional employees (including its Alliance Manager), and, with the consent of the other Party, consultants or scientific advisors, to attend the meetings of the JDC, provided that such employees, consultants and advisors have entered into agreements that contain provisions, as applicable, regarding Intellectual Property, Disclosure, and Confidential Information that comply with the provisions of this Agreement.

(e) Each Party shall be responsible for all of its own expenses of participating in the JDC, including all costs of travel, food and lodging for a Party's representatives attending an in-person meeting.

(f) The Chair of the JDC shall be responsible for providing notice of all meetings to the members of the JDC, leading the meetings and (unless the representatives of the JDC agree upon a person to act as secretary of the meeting of the JDC), appointing a representative of the JDC to act as secretary of each meeting. Notice of meetings shall be given to all JDC members at least two (2) weeks in advance for in-person meetings and at least one (1) week in advance for audio or video teleconferences.

(g) A quorum for a meeting of the JDC shall be two (2) representatives of each Party.

(h) The secretary of each meeting shall prepare, and the JDC Chair shall distribute to all members of the JDC, minutes of the meeting within fifteen (15) Business Days following the date of the meeting to allow adequate review and comment. Such minutes shall provide a description in reasonable detail of the discussions held at the meeting and a list of any actions, decisions or determinations approved by the JDC. Minutes of each meeting shall be approved or revised as necessary at the next meeting. The approved minutes of each meeting shall be distributed to the representatives of the JDC by the Chair of the JDC within thirty (30) days of such approval.

3.4 Decision Making

At all times, the representatives of each Party on the JDC shall take into consideration the view of the representatives of the other Party regarding the matters under consideration by the JDC, and the objective of the JDC shall be to reach agreement by consensus on matters after reasonable and open discussion. Each Party, but not each representative of a Party, shall have one vote on all matters coming before the JDC. In the event that the JDC cannot reach agreement on a matter by consensus, [†].

3.5 Responsibilities

Notwithstanding anything to the contrary in this ARTICLE 3, each Party shall have and retain the rights, powers and discretion granted to it under this Agreement and the JDC shall not be vested with any right, power or discretion except as expressly provided in this Agreement and shall not have the power to amend or modify this Agreement, including the Collaborative Development Plan, which may only be amended or modified as provided in Section 16.15.

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3.6 Annual Plan

(a) For each Product under Development, Ivax shall prepare, and submit to the PDC within thirty (30) days following the date of formation of the PDC (as set forth under Section 3.2(e) above), and thereafter not less than thirty (30) days prior to each anniversary of the Effective Date, an annual Development plan (an "**Annual Plan**") for the period of one (1) year commencing on the next succeeding anniversary of the Effective Date, with respect to such year:

(i) A general overview and timetable for Ivax's planned Development activities for such Product; and

(ii) Specific objectives of the Development activities for such Product, including objectives pertaining to:

- Projected timelines for commencement of Phase I Clinical Trials, Phase II Clinical Trials, and Phase III Clinical Trials (as applicable),
- Projected timelines for NDA Filings and NDA Approvals, and
- Manufacturing activities.

3.7 Subcontractors

Except with the prior written consent of Ivax or as specifically provided in the Collaborative Development Plan, Xenon may not subcontract to a Third Party any of its obligations pursuant to the Collaborative Development Plan. In the event that the Collaborative Development Plan provides for Xenon to subcontract any such obligations and Ivax has provided its consent respecting same, Xenon will ensure that such subcontractor has entered into agreements that contain provisions, as applicable, regarding Intellectual Property, Disclosure, and Confidential Information that comply with the provisions of this Agreement.

ARTICLE 4
DISCLOSURE AND REPORTS DURING THE COLLABORATIVE DEVELOPMENT TERM

4.1 Technology Transfer

(a) Commencing as soon as reasonably practicable following the Effective Date, Xenon will disclose Xenon Background Know-How to Ivax, and commencing as soon as reasonably practicable following finalizing the Collaborative Development Plan as set forth in Section 3.2(a)(i), Ivax will disclose Ivax Background Know-How to Xenon, in each case to the extent that the respective Party, in good faith believes is necessary for the Development activities to be efficiently and effectively undertaken by the other Party pursuant to the Collaborative Development Plan.

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(b) Within thirty (30) days after the Effective Date, Xenon shall [†] relating to all Products, including all INDs and all related documentation and information (the "**Regulatory Documents**"**)**, [†].

(c) Within thirty (30) days of a request from Ivax or as otherwise set forth in the Collaborative Development Plan, Xenon shall deliver to Ivax [†] any XEN402 compound, XEN403 compound, or Products in Xenon's possession, for the Parties' use in conducting the Development activities under the Collaborative Development Program.

(d) Xenon shall use commercially reasonable efforts to provide Ivax with a reasonable amount of assistance from its employees, in connection with or related to any or all of the Development activities being undertaken by Ivax in connection with the Collaborative Development Program, including to the extent requested by Ivax, Ivax's establishment of manufacturing facilities for Products.

(e) The Parties shall use reasonable efforts to take such other actions and execute such other instruments, assignments and documents as may be necessary or reasonably useful to achieve the transfer of rights hereunder to Ivax, or to otherwise effectuate the purposes of this Agreement.

(f) The consulting services to be provided by Xenon employees under Section 4.1(d) and 4.1(e) are separate and apart and "additional" to those contemplated under the Collaborative Development Plan. The first [†] hours per Year of such additional consulting services by Xenon employees and/or any further additional consulting services (including those additional consulting services described in Section 6.1(a) and Section 10.3(a)(iv) below, will be provided by Xenon at no charge to Ivax up until the date of the first NDA Filing. Any consulting services beyond [†] hours per Year or following the date of the first NDA Filing will be mutually agreed to between Xenon and Ivax, and Ivax will pay Xenon for such further consulting services at an hourly rate cost equivalent to Xenon's then-current FTE cost rate, such rate which will be agreed to between the Parties at the relevant time(s).

4.2 Quarterly Reports

Each Calendar Quarter during the Collaborative Development Term, at or prior to the quarterly JDC meeting referenced in Section 3.3(a), each Party shall provide to the other a written progress report in accordance with Section 3.2(a)(vi) above, which shall summarize the work performed to date on the Collaborative Development Program, evaluate the work performed in relation to the objectives of the Collaborative Development Program, and provide such other information required by the Collaborative Development Program or reasonably requested by the JDC. For

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clarity, PROVIDED that such materials are in such form and format and contain such content as requested by the JDC, materials prepared by each Party for presentation at any JDC meeting (e.g., slide decks, GANTT charts), shall be deemed to satisfy the requirement to provide a written progress report pursuant to this Section 4.2.

4.3 Technology Disclosure

Within each quarterly report referred to in Section 4.2, or more frequently if requested by the JDC or either Party, each Party shall disclose to the other Party in writing any Collaboration IP.

4.4 Books and Records

Each Party shall maintain Books and Records in connection with its and its Affiliates' activities pursuant to the Collaborative Development Program.

4.5 Copies and Inspection of Records

Each Party shall have the right, during normal business hours and upon reasonable notice, to inspect and copy all such records of the other Party referred to in Section 4.4. Each Party shall maintain such records and the information disclosed therein in confidence in accordance with ARTICLE 11. The Party whose records are being inspected may elect, at its sole discretion, to have the inspection conducted by a Third Party, mutually acceptable to both Parties. Such Third Party shall agree to comply with the applicable Confidential Information provisions of this Agreement,

4.6 Material Transfers

In connection with the Collaborative Development Program, each of the Parties may from time to time provide to the other Party or its Affiliates materials owned by or licensed to the delivering Party (such materials, "**Substances**"). Except as otherwise provided under this Agreement, such Substances may be used for activities pursuant to the terms of this Agreement and no other rights in such Substances shall be conveyed by the delivering Party. All such Substances delivered shall remain the sole property of the delivering Party. Except as otherwise authorized under this Agreement, such Substances shall not be used for any purpose other than activities pursuant to this Agreement, and shall not be used by, delivered to or used for the benefit of, any Third Party without the prior written consent of the delivering Party, and shall not be used in research or testing of human subjects unless otherwise specified in the Collaborative Development Program. Because not all of their characteristics may be known, the Substances supplied under this Section 4.6 must be used with prudence and appropriate caution in any experimental work. THE SUBSTANCES ARE PROVIDED "**AS IS**" AND WITHOUT ANY REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE OR ANY WARRANTY THAT THE USE OF THE SUBSTANCES WILL NOT INFRINGE OR VIOLATE ANY PATENT OR OTHER PROPRIETARY RIGHTS OF ANY THIRD PARTY.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

ARTICLE 5
MANUFACTURE AND SUPPLY

5.1 Manufacturing and Supply

Unless otherwise agreed in writing by the Parties, Ivax shall have the sole right and responsibility for, and control over, all Manufacturing of XEN402, XEN403 and Products, at its sole cost. As of the Effective Date, the Parties agree that the active Third Party agreements related to the Manufacture of the Product for Clinical Trials sponsored by Xenon are identified in Schedule H. Xenon shall devote all reasonable commercial efforts to obtaining the consent to assign such Third Party agreements to Ivax, and effecting the assignment of the Third Party agreements identified in Schedule H, within thirty (30) days after the Effective Date.

ARTICLE 6
DEVELOPMENT, COMMERCIALIZATION AND CO-PROMOTION

6.1 Diligence—Development and Commercialization Activities

(a) Subject to Xenon's obligations under the Collaborative Development Program pursuant to the provisions of this Agreement and the Xenon Co-Promote Option as set forth under Section 6.3 below, as between the Parties, Ivax shall be solely responsible for the Development, Manufacture and Commercialization of Products in the Territory, at its sole cost. Ivax and Xenon, as applicable, shall devote Diligent Efforts to the Development, Manufacture and Commercialization of Products. In accordance with Section 4.1(f) above, upon the reasonable request of Ivax, Xenon shall provide appropriate personnel to assist and consult with Ivax regarding Ivax's activities related to the Development, Manufacture and Commercialization of Products.

(b) Ivax's Diligent Efforts referenced in Section 6.1(a) above shall specifically include:

(i) not having Ceased Development of a Product in any Major Market; provided, for clarity, [†]; and

(ii) having Completed [†] Phase II Clinical Trials, [†], each as described in the Initial Summary Collaborative Development Plan and the Collaborative Development Plan hereunder; PROVIDED that Ivax may, in its sole discretion, cease any Clinical Trial set forth in this Section 6.1(b)(ii) if, in Ivax's sole discretion, such Clinical Trial triggers a Safety Signal, in which case Ivax will have no obligation to Complete the Clinical Trial that triggered such Safety Signal, however Ivax's obligation to Complete [†] other Phase II Clinical Trials in accordance with the terms herein, using any formulation or dosage in which such Safety Signal has not been observed, shall continue, unless the Parties agree that (A) the Safety

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Signal observed is relevant to the other remaining (not yet Completed) Phase II Clinical Trial(s) referenced above, and (B) it is probable that such Safety Signal will also be observed in such other remaining Phase II Trial(s).

For purposes of the aforementioned [†] Phase II Clinical Trials, each such Phase II Clinical Trial will be considered "**Completed**" on the date that Ivax completes (1) its first Data Lock for the Phase II Clinical Trial for each Product, and (2) its data analysis respecting the primary and secondary end points established for such Clinical Trial pursuant to the Collaborative Development Plan. As used herein, "**Data Lock**" shall mean, [†]. Notwithstanding the foregoing sentence, if primary endpoint or safety data for such Phase II Clinical Trial is publically disclosed, Data Lock will be deemed to have occurred with respect to such Clinical Trial.

(c) For avoidance of doubt, at its discretion, Ivax may substitute a Phase III Clinical Trial for [†] the Phase II Clinical Trials referenced above.Ivax's responsibilities referenced in Section 6.1(a) above shall specifically include the following:

(i) Ivax shall have the responsibility for the timely preparation, filing and prosecution of all filings, submissions, authorizations or approvals related to any INDs or NDAs for the Products with Regulatory Authorities in the applicable countries, and shall own and control all such INDs, NDAs, NDA Filings, submissions, authorizations and NDA Approvals;

(ii) Ivax shall be the primary contact with each applicable Regulatory Authority and shall be solely responsible for all communications with each applicable Regulatory Authority that relate to any IND, NDA Filing, NDA, or NDA Approval for the Products; and

(iii) From and after the Regulatory Document Transfer Date, Ivax shall have exclusive authority and responsibility to submit all reports or amendments necessary to maintain any IND, NDA Filing, NDA, or NDA Approval for the Products. Without limiting the generality of the foregoing, Ivax shall have sole authority and responsibility to seek and/or obtain any necessary Regulatory Authority approvals of any Product label, or Regulatory Authority-approved prescribing information, package inserts, monographs and packaging used in connection with a Product, as well as promotional materials and labels used in connection with a Product, and for determining whether the same requires Regulatory Approval.

6.2 Ivax Reports Following the Collaborative Development Term

Ivax shall submit to Xenon, within thirty (30) days following the expiration of each period of [†] months following the expiration of the Collaborative Development Term and (with respect to the

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reports referenced in Section 6.2(a) below, in advance of each PDC meeting as referenced in Section 3.2(e) above), a written report for the applicable reporting period describing, in reasonable detail, Ivax's efforts, and progress made, with respect to the Development and Commercialization of Products for which Xenon is eligible for or is due Milestone Payments or Royalty Payments under this Agreement, such report(s) which will include:

(a) respecting Development activities:

(i) [†];

(ii) [†];

(iii) [†];

(iv) [†];

(v) [†];

(vi) such other information that is reasonably requested by Xenon and/or that will assist Xenon in determining if Ivax has complied with its obligations under Section 6.1 above.

(b) respecting Commercialization activities:

(i) [†];

(ii) [†];

(iii) [†];

(iv) [†];

(v) [†];

(vi) such other information that is reasonably requested by Xenon and/or that will assist Xenon in determining if Ivax has complied with its obligations under Section 6.1 above.

For clarity, PROVIDED that such materials are in such form and format and contain such content as requested by the PDC, materials prepared by each Party or its Affiliates for presentation at any PDC meeting (e.g., slide decks, GANTT charts) shall be deemed to satisfy the requirement to provide a written report pursuant to Section 6.2(a). Ivax will reasonably make available to Xenon from time to time, in person at Ivax's offices, those of its representatives who are capable of discussing and elaborating on such report(s) with Xenon.

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6.3 Xenon Co-Promote Option

Xenon shall have the exclusive right and option, to co-promote Products within the US, subject to the terms and conditions set out in Schedule F.

ARTICLE 7
CLOSING PAYMENT AND MILESTONE PAYMENTS

7.1 Closing Payment

Within two (2) Business Days (as evidenced by wire transfer confirmation) of the execution of this Agreement by the Parties, Ivax shall pay to Xenon the sum of Forty-One Million Dollars ($41,000,000).

7.2 Development Milestone Event and Payment

On the first occasion of the following events (each, a "**Development Milestone Event**") Ivax shall pay to Xenon, at the time set out in Section 7.4(a), the applicable amount set opposite such event:

Development Milestone Event	Payment Amount
[†]	$ [†]
[†]	$ [†]
[†]	$ [†]
[†]	$ [†]
[†]	$ [†]

7.3 Sales Milestone Events and Payments

Upon achievement of the following event (a "**Sales Milestone Event**") Ivax shall pay once to Xenon at the time set out in Section 7.4(b), the amount set opposite such event:

Sales Milestone Event	Payment Amount
[†]	$ [†]

7.4 Time of Payment

(a) The amounts set out in Section 7.2 shall be paid within [†] following achievement of the respective Milestone Event.

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(b) The amount set out in Section 7.3 in respect of the Sales Milestone Event shall be paid within [†] following the end of the calendar year in which the Sales Milestone Event is achieved.

7.5 Affiliates and Sublicensees

The Milestone Payments are payable by Ivax to Xenon regardless of whether the respective Milestone Event is achieved by Ivax or its Affiliate or Sublicensee.

ARTICLE 8
ROYALTIES

8.1 Full Royalty

(a) For Products Covered by a Valid Claim and/or for Market Protected Products, Ivax shall pay to Xenon a royalty (the **"Full Royalty") ** on annual Net Sales of such Products in the Territory [†], at the percentage rate set out as follows:

Annual Net Sales [†]	Royalty Rate
[†]	[†]%
>[†] but £ [†]	[†]%
>[†] but £ [†]	[†]%
>[†]	[†]%

(b) In Section 8.1(a) only, for purposes of determining the applicable percentage rate in the table above, (i) [†], and (ii) [†].

8.2 Know-How Royalty

(a) For Products other than (i) [†], or (ii) [†], Ivax shall pay Xenon a royalty (the "**Know-How Royalty**"), on annual Net Sales of such Products in the Territory [†], at the percentage rate set out as follows:

Annual Net Sales [†]	Royalty Rate
[†]	[†]%
>[†] but £ [†]	[†]%
>[†] but £ [†]	[†]%
>[†]	[†]%

(b) In Section 8.2(a) only, for purposes of determining the applicable percentage rate in the table above, (i) [†], and (ii) [†]; and

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(c) [†]:

(i) [†], and

(ii) [†],

[†].

8.3 Generic Products

(a) If, during any Calendar Quarter in which a Royalty Payment is payable, a Third Party or Third Parties sells a Product (a "**Generic Product**") in a country within the Territory, and:

(i) with respect to the Product that contains the same Active Pharmaceutical Ingredient as the Generic Product and [†], or

(ii) [†],

then the Royalty that would otherwise be payable to Xenon by Ivax shall be reduced by [†] (the "**Reduced Royalty**") for said Calendar Quarter. Ivax shall pay the Reduced Royalty [†]. For avoidance of doubt, in the event that the circumstances described in Subsection 8.3(a)(i) and Subsection 8.3(a)(ii) are both applicable, the Royalty payable to Xenon by Ivax shall not be reduced by more than [†] by virtue of the operation of this Section 8.3(a). For purposes of this Section 8.3, determination of [†].

(b) [†].

(c) [†].

8.4 Royalty Stacking Offsets

[†], then, in that event, the Royalty Payments payable to Xenon under this ARTICLE 8 respecting the sale of such Product in such country to which [†].

8.5 Combination Products

(a) If a Product is sold in the form of a Combination Product, Net Sales of such Combination Product shall be determined by [†], PROVIDED that such fraction shall not be a fraction less than [†].

(b) [†].

(c) [†].

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(d) For clarity, Royalty Payments will be paid on Combination Products during the applicable Royalty Term.

(e) "**Arbitration**" shall mean arbitration by a single arbitrator pursuant to the provisions of the American Arbitration Association (AAA) expedited proceeding rules, or any successor rules or legislation then in force. The Parties agree that the arbitrator will have the discretion to access all reasonable expenses of arbitration (including arbitration fees, expert fees, arbitration costs and attorney's fees) against the losing Party, and further agree that the Parties will each have the right, but not the obligation, to conduct discovery as part of such arbitration process. The place of arbitration shall be Toronto, Ontario. Any award rendered in such arbitration may be enforced by either Party in any state, provincial or federal court with jurisdiction over the Party against whom the award is sought to be enforced.

8.6 Limits on Royalty Reductions

Notwithstanding the provisions of Section 8.4, the Royalty payable to Xenon shall not be reduced below [†] for Products to which the Full Royalty is applicable and [†] for Products to which the Know-How Royalty is payable, unless [†] in which case, under no circumstances shall the Royalty payable to Xenon for Products be reduced [†].

8.7 Non-Monetary Consideration

In the event that Ivax or any of its Sublicencees, receives any non-monetary consideration in connection with the sale or other disposition for value of Products under which Royalty Payments or Milestone Payments are applicable hereunder, including barter or counter-trade, the Net Sales of such Product shall be calculated based on the greater of the fair market value of the Product in the country of sale or disposal or the value of such other consideration. Ivax shall disclose to Xenon the terms of any such non-monetary consideration arrangement promptly on entering into such arrangement and the Parties shall endeavour in good faith to agree on the fair market value in monetary terms as promptly as possible. Where the Parties cannot agree upon such fair market value within sixty (60) days of the aforementioned disclosure, the matter shall be resolved pursuant to the terms set forth in ARTICLE 13.

8.8 Royalty Reports; Payments

(a) Within [†] days after the end of each Calendar Quarter in which a Royalty Payment is payable hereunder to Xenon, Ivax shall submit to Xenon a report on the basis of each Product and country, providing in reasonable detail an accounting of all Net Sales made during such Calendar Quarter and the calculation of the applicable Royalty under this ARTICLE 8 including:

(i) Net Sales (in U.S. dollars) of each Product in each country in the Territory during the Calendar Quarter by Ivax and each of its Affiliates and Sublicensees;

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(ii) the exchange rates used to calculate the U.S. dollar amount of such Net Sales from the currencies in which such sales were made, as provided in Section 8.11; and

(iii) the amount of any non-monetary consideration for Net Sales, as determined pursuant to Section 8.7.

(b) Concurrently with such report, Ivax shall pay to Xenon all Royalty Payments payable by it under this ARTICLE 8 as indicated in the report.

(c) True-Up:

(i) Within [†] days after the end of each Year during a Royalty Term, Ivax shall perform a "true-up" reconciliation (and shall provide Xenon with a written report of such reconciliation) of the deductions outlined in subsections (iii), (iv), and (v) in the definition of "Net Sales." The reconciliation shall be based on actual cash paid or credits issued plus an estimate for any remaining liabilities incurred related to the Product, but not yet paid. If the foregoing reconciliation report shows either an underpayment or an overpayment between the Parties, the Party owing payment to the other Party shall pay the amount of the difference to the other Party within thirty (30) days after the date of delivery of such report.

(ii) Within [†] months after the termination or expiration of this Agreement, Ivax shall perform a "final true-up" reconciliation (and shall provide Xenon with a written report of such reconciliation) of the items comprising deductions from Net Sales [†] as outlined in subsection (vi) in the definition of Net Sales. The reconciliation shall be based on actual cash paid or credits issued for returns, through the [†] period following the termination or expiration of this Agreement. If the foregoing reconciliation report shows either an underpayment or an overpayment between the Parties, the Party owing payment to the other Party shall pay the amount of the difference to the other Party within thirty (30) days after the date of delivery of such report.

(iii) In the event that any "true-up" reconciliation performed pursuant to (i) above, shows an underpayment by Ivax for such Year in an amount greater than [†] percent ([†]%) of the total amount payable to Xenon for such Year, then Ivax shall pay to Xenon any payment owed pursuant to (i) above, together with interest calculated from the first day of the Year to which such payment applies, in the manner provided in Section 8.12.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

8.9 Audits

(a) Ivax shall keep (and shall cause each of its Affiliates and Sublicencees to keep and make available to Xenon pursuant to this Section 8.9) complete and accurate records of the underlying data relating to the reports and payments required by this ARTICLE 8 for a period of not more than [†] years after delivery of the report setting forth such payment computation. Xenon shall have the right from time to time (but not more often than once in each Year) at its own expense to have a reputable firm of independent accountants mutually acceptable to the Parties (PROVIDED that such accounting firm shall not be retained or compensated on a contingency basis) review any such records in the location(s) where such records are maintained upon reasonable notice and during regular business hours and under obligations of strict confidence, for the sole purpose of verifying the basis and accuracy of payments made under this ARTICLE 8, PROVIDED that the reports for any previous Year may not be audited more than once. Such accountants shall sign a confidentiality agreement in form and substance reasonably satisfactory to Ivax, and shall not disclose to Xenon or any Third Party any information reasonably labeled by Ivax as being confidential customer information regarding pricing or other competitively sensitive proprietary information. Xenon shall provide Ivax with a copy of the report or other summary of findings prepared by such accountants promptly following its receipt of same;

(b) If the review of such records reveals that additional payments were owed by Ivax during such period, and Ivax agrees with such conclusion, then Ivax shall promptly pay to Xenon any resulting amounts due under this Section 8.9, together with interest calculated in the manner provided in Section 8.12. In the event the review of such records reveals that Ivax overpaid the actual payments required by this ARTICLE 8 during such period, and Xenon agrees with such conclusion then, Xenon shall promptly repay to Ivax any amounts of such overpayment, together with interest calculated in the manner provided in Section 8.12; PROVIDED that Ivax can alternatively deduct such overpayment from future payments required by this ARTICLE 8 at Xenon's option. If any amounts due under this Section 8.9 as a result of such audit are greater than [†] percent ([†]%) of the amounts actually due for a Year, Ivax shall pay the reasonable costs of such review; and

(c) If either Party in good faith disputes any conclusion of the accounting firm under this Section 8.9, including that Ivax owes additional amounts, then such Party shall inform the other Party by written notice within thirty (30) days of receipt of a copy of the audit in question, specifying in detail such dispute. The Parties shall promptly thereafter meet and negotiate in good faith a resolution to such dispute. In the event that the Parties are unable to resolve such dispute within sixty (60) days after such notice, the matter shall be resolved pursuant to the terms set forth in ARTICLE 13, and interest shall be payable on any disputed amounts determined to be due in the same manner as provided for in Section 8.12.

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8.10 Tax Matters

Any withholding or other taxes which a paying Party is required by law to pay or withhold from royalties or other payments payable to a receiving Party under this Agreement shall be deducted from the amount of such royalties or other payments due, and promptly paid or remitted as appropriate, by the paying Party. Any such tax required by law to be paid or withheld shall be an expense of, and borne solely by, the receiving Party. The paying Party shall furnish the receiving Party with the best available evidence of such payment or amount withheld as soon as practicable after such payment is made or such amount is withheld. The receiving Party shall furnish the paying Party with appropriate documents supporting application of the most favourable rate of withholding or other tax available under Applicable Law and/or tax treaties. The Parties will each, respectively, devote all reasonable efforts to ensuring that all such taxes are paid or remitted, as appropriate, at the most favourable rate(s) proposed and adequately supported by the receiving Party. The Parties will reasonably co-operate in completing and filing documents required under the provisions of any applicable tax laws or any other Applicable Law in connection with the making of any required tax payment or withholding payment, in connection with a claim of exemption from, or entitlement to, a reduced rate of withh**o**lding or in connection with any claim to a refund of or credit for any such payment.

8.11 Currency Exchange

All Net Sales and amounts due to Xenon hereunder shall be expressed and paid in US dollars. With respect to Net Sales invoiced in a currency other than US dollars, the Net Sales shall be expressed in the domestic currency of the entity making the sale or incurring the expense, together with the US dollar equivalent, calculated using the average exchange rate for the purchase of US dollars over the course of the Calendar Quarter in which Net Sales were made or the expense was incurred. Such average exchange rates for the conversion of foreign currency into US dollars will be calculated by averaging the daily closing rates published on the internet by Reuters (or such other organization as the Parties may agree to in writing from time to time) pertaining to the relevant Calendar Quarter. All payments shall be made in US dollars in immediately available funds.

8.12 Late Payments

Any payments that are not paid on or before the date such payments are due under this Agreement shall be payable on the aggregate amount of such payment at a rate per annum equal to the lesser of the US prime rate of interest plus [†] percent ([†]%), as reported by THE WALL STREET JOURNAL, or the highest rate of interest permitted by Applicable Law, compounded annually, and calculated on the number of days such payments are paid after the date such payments are due.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

8.13 Mode of Payment

Unless otherwise agreed by Xenon, all payments required to be made to Xenon under this Agreement shall be made via wire transfer to an account designated in writing in advance by Xenon.

8.14 Bank Account

All payments hereunder shall be made in United States dollars by bank wire transfer in immediately available funds to the account listed below (or such other account as Xenon shall from time to time advise Ivax in writing before such payment is due):

Bank:
Royal Bank of Canada

Bank Address:
Main Branch – Royal Center
1025 W. Georgia Street
Vancouver BC V5E 3N9 Canada
[†]
[†]

8.15 Costs

Except as otherwise provided in this Agreement, each Party shall bear its own costs of performing its obligations under this Agreement PROVIDED that in the event that Xenon is required to incur out-of-pocket costs in connection with providing to Ivax any assistance that is from time to time requested by Ivax from Xenon pursuant to the terms of this Agreement in connection with the Development and Commercialization of Products in the Territory, Xenon's obligation to provide such assistance shall be subject to Xenon and Ivax first agreeing in writing on the amount of such out-of-pocket costs, and Ivax shall thereafter reimburse Xenon for the amount of such agreed costs within thirty (30) days of receipt of an invoice from Xenon for such costs.

8.16 Sublicensees

The Royalty Payments are payable by Ivax to Xenon regardless of whether the respective Net Sales of Products are made by Ivax or its Affiliate or Sublicensee.

8.17 Post-Royalty Term

Following the expiration of the Royalty Term, [†].

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

8.18 No Set-Off

All payments required to be made by each Party to the other pursuant to this Agreement shall be made without any set-off or deduction except as expressly provided herein.

ARTICLE 9
LICENSES

9.1 Xenon Licenses to Ivax

Xenon hereby grants to Ivax and its Affiliates:

(a) under the Xenon Background IP an exclusive license in the Field (even as to Xenon), with the right to sublicense, within the Territory subject to Section 9.6(c) below, to research, Develop, Manufacture, have Manufactured, market, make use, offer for sale, sell, export and import for sale, or otherwise Commercialize Products; and

(b) under the Patent Rights within Xenon Background IP Covering R1150W, such Patent Rights which are described in Schedule E under the heading "*Section II:* [†]", a non-exclusive license, with the right to sublicense, within the Territory, to research, Develop, Manufacture, have Manufactured, market, make use, offer for sale, sell, export and import for sale, Diagnostic Products.

The Parties agree that the JDC or PDC, as applicable and pursuant to the Collaboration Development Program, will direct any Development and/or Commercialization of Diagnostic Products at Ivax's sole expense, for example as a companion diagnostic for the Products. In the event Ivax or any of its Affiliates or Sublicensees desires to Commercialize such Diagnostic Products for profit, prior to any such Commercialization, the Parties shall enter into good faith negotiations and agree upon a royalty rate for any such Commercialization of Diagnostic Products by Ivax, under commercially reasonable terms for diagnostic products in the pharmaceutical industry.

(c) Pursuant to Section 50(2) of the *Canadian Patent Act*, as applicable, from and after the Effective Date, Xenon will execute all documents necessary to apply, register or record Ivax's right, title and interest in Patent Rights under this Agreement in the Canadian Intellectual Property Office, the content of such document to be agreed upon by the Parties, and Xenon shall provide such cooperation at Ivax's cost, as Ivax may reasonably request.

9.2 Ivax License to Xenon

Ivax hereby grants to Xenon and its Affiliates, under the Xenon Background IP, Ivax Background IP, Collaboration IP and Ivax Co-Promotion IP (as applicable under part (b) herein), a co-exclusive (with Ivax) license:

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(a) to conduct Development activities pursuant to the Collaborative Development Program as set forth in the Collaborative Development Plan including any amendments to the Collaborative Development Plan made by the JDC in accordance with the terms set forth herein; and

(b) to conduct the activities set out in Schedule F respecting Products to which Xenon has exercised the Xenon Co-Promote Option.

9.3 Sublicense Rights

(a) Ivax may grant sublicenses of its licensed rights under Section 9.1 without the prior consent of Xenon, PROVIDED that:

(i) Such Sublicenses contain an agreement by the Sublicensee to comply with the applicable terms and conditions of this Agreement as set out herein;

(ii) Ivax shall be and remain responsible for failure by its Sublicensees to comply with the terms and conditions of this Agreement, and any action or omission by such Sublicensee that, if committed by Ivax would be a breach of this Agreement, would be deemed a breach by Ivax of this Agreement for which Ivax is responsible;

(iii) Each Sublicense shall terminate upon the termination of this Agreement on a country-by-country basis; and

(iv) Ivax shall give notice in writing and a copy of such Sublicense to Xenon promptly following the grant of any Sublicense, PROVIDED that Ivax may redact from such copy of any such sublicense any financial or other information that is outside of the scope of and does not relate in any way whatsoever to the license or other rights granted to Ivax under this Agreement, or to the Milestone Payments or Royalty Payments to which Xenon is entitled under this Agreement.

9.4 Negative Covenant

Each Party covenants that neither it nor any of its Affiliates shall use or practice any of the other Party's Intellectual Property rights licensed to it under this Agreement except for the purposes expressly permitted in the applicable license granted under this Agreement.

9.5 No Implied Licenses

Ivax acknowledges and agrees that it shall have no right, title or interest in or to the Xenon Background IP except for the rights expressly set forth in this Agreement. Xenon acknowledges and agrees that it shall have no right, title or interest in or to the Ivax Background IP or Collaboration IP except for the rights expressly set forth in this Agreement. Nothing in this Agreement shall be construed to grant to either Party or its Affiliates any rights or license to any Intellectual Property of the other Party or the other Party's Affiliates other than the licenses expressly set forth in this Agreement.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

9.6 [†] Considerations respecting XEN403

(a) [†]:

(i) [†], and

(ii) [†]

[†].

(b) [†].

(c) [†].

(d) [†]:

(i) [†];

(ii) [†];

(iii) [†]; and

(iv) [†].

(e) [†].

9.7 [†] Considerations respecting XEN402

The Parties hereto expressly confirm and agree as follows:

(a) [†].

(b) [†].

(c) [†].

(d) [†]:

(i) [†];

(ii) [†].

(iii) [†].

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(iv) [†].

(v) [†].

(vi) [†].

(vii) [†].

ARTICLE 10
INTELLECTUAL PROPERTY OWNERSHIP, PROTECTION AND ENFORCEMENT

10.1 Ownership of Intellectual Property

(a) The determination of whether Intellectual Property is conceived, discovered, developed, or otherwise made by a Party or its Affiliates for the purpose of allocating proprietary rights therein (including inventorship of Patent Rights), shall, for purposes of this Agreement be determined in accordance with the Applicable Law of [†] as of the Effective Date irrespective of where such conception, discovery, development or making occurs.

(b) Subject to the terms and conditions set forth in this Agreement:

(i) As between the Parties, Ivax shall own and retain all right, title, and interest in and to any and all (1) Ivax Background IP, (2) [†], and (3) [†];

(ii) as between the Parties, Xenon shall own and retain all right, title, and interest in and to any and all (1) Xenon Background IP, and (2) [†]; and

(iii) [†]. As used herein, "**Joint Collaboration IP**" means any and all Collaboration IP that is conceived, identified, or first made jointly by or on behalf of Ivax (either alone or with its Affiliates or Sublicensees or Third Parties) on the one hand, and by or on behalf of Xenon (either alone or with its Affiliates or subcontractors) on the other hand and "**Joint Patent Rights**" means the Patent Rights under Joint Collaboration IP. Xenon shall promptly disclose to Ivax in writing the development, making, conception or reduction to practice of any Joint Collaboration IP.

(c) Subject to the licenses granted by one Party to the other and/or as otherwise specifically provided under this Agreement, each Party retains full ownership rights (including as provided under 35 U.S.C. Section 262) in and to such Intellectual Property described in Section 10.1(b)(i) and (b)(ii) above, and including the right to license and sublicense, and to freely exploit, transfer or encumber its ownership interest without the consent of, or payment or account to the other Party or its Affiliates. Each Party hereby waives any right it may have under the laws of any jurisdiction to request such payment, accounting or consent with respect to such Intellectual Property. [†].

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(d) Each Party shall require all of its employees, contractors, agents, and any other Person including its Affiliates working on its behalf (and their respective employees, contractors and agents) [†].

(e) The Parties shall cooperate with each other to effectuate ownership of any such Intellectual Property as set forth in this Agreement, including, but not limited to, executing and recording documents associated herewith.

(f) Ivax shall have the sole right to reference any Intellectual Property with respect to the Products to Regulatory Authorities in the Territory, including Xenon Background IP, Ivax Background IP, and Collaboration IP, including in connection with NDA Filings or NDA Approvals, and the Approved Drug Products with Therapeutic Equivalence Evaluations ("**Orange Book**") or other international equivalents. Xenon shall cooperate with Ivax's reasonable requests in connection therewith, including meeting any submission deadlines to the extent required or permitted by Applicable Law or Regulations.

(g) Upon receiving Regulatory Approval for a Product in any country in the Territory or upon such earlier timeframe as may be applicable under the circumstances, the Parties shall coordinate the application(s) for any patent term extension or supplementary protection certificates that may be available, and Ivax shall determine for which patent(s) it shall apply for patent term extension for a particular Product in the Territory. Notwithstanding anything to the contrary in this Section or Section 10.3 below[†]. While Ivax shall have the primary responsibility of applying for any extension or supplementary protection certificate in the Territory, Xenon shall provide prompt and reasonable assistance, as requested by Ivax, including by taking such action as a patent assignee as is required under any Applicable Law to obtain such patent extension or supplementary protection certificate. Ivax shall pay all expenses in regard to obtaining the extension or supplementary protection certificate in the Territory.

10.2 Prosecution and Maintenance of Ivax Background IP

Ivax shall have the sole right but not obligation, in its discretion, to prepare, file, prosecute and maintain all Ivax Background IP in the Territory, with patent counsel of its choice, including initiating interferences, re-examinations, reissues, oppositions, revocation actions and the like, and gaining patent term restorations, supplemental protection certificates or their equivalents, and patent term extensions with respect thereto. Ivax shall bear the cost of such prosecution and maintenance.

10.3 Prosecution and Maintenance of Collaboration IP and Xenon Background IP

(a) During the Term, Ivax shall have the right and final authority, but not the obligation, to prepare, file, prosecute, maintain and control Patent Rights Covering Xenon Background IP and Collaboration IP in the Territory (except for

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the Patent Rights within Xenon Background IP Covering R1150W, that are described in Schedule E, Section II), with patent counsel of its choice, including initiating interferences, re-examinations, reissues, oppositions, revocation actions and the like, and gaining patent term adjustments or restorations, supplemental protection certificates or their equivalents, and patent term extensions with respect thereto (**"Patent Prosecution**"), on the following terms:

(i) Ivax shall keep Xenon informed of all material matters with regard to Patent Prosecution of such Patents Rights, including its choice of patent counsel and the scope and progress of Patent Prosecution of the Collaboration Patent Rights and Xenon Background Patent Rights licensed hereunder;

(ii) Ivax shall provide Xenon with copies of all material correspondence, submissions and documentation to and from any patent authority in the Territory pertaining to such Patent Rights, and shall provide Xenon drafts of any material filings or responses to be made to such patent authorities in the Territory sufficiently in advance of submitting such filings to allow Xenon to review and comment on such drafts, and Ivax will, in good faith, consider and not unreasonably reject Xenon's comments and/or recommendations respecting same;

(iii) Ivax shall provide to Xenon, so often as reasonably requested, written reports listing the jurisdictions for Patent Prosecution;

(iv) Xenon shall make its employees (including inventors employed by Xenon), agents, and consultants, reasonably available to Ivax (or to its authorized attorneys, agents or representatives), to the extent reasonably necessary to enable Ivax to undertake Patent Prosecution and otherwise cooperate with and assist Ivax with respect to Patent Prosecution matters and effectuate the ownership of Intellectual Property as set forth in this ARTICLE 10, and will also make available to Ivax such copies of material correspondence with patent offices in the Territory that may be requested by Ivax that are in Xenon's possession respecting applications for Patent Rights relating to Xenon Background IP. Further, in accordance with Section 4.1(f) Xenon will provide such further information, documents and consultation that may be reasonably requested by Ivax; and

(v) Except as provided in Section 10.3(c), Ivax shall bear the cost of all matters pertaining to Patent Prosecution of such Patent Rights.

(b) Ivax shall have the right to cease Patent Prosecution of any Patent Rights covering any Xenon Background IP or Collaboration IP anywhere in the Territory, *with the exception* of any such Patent Rights respecting which[†], without Xenon's consent, not to be unreasonably withheld. Subject to the foregoing, Ivax shall give

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Xenon notice in writing of any determination by Ivax to cease Patent Prosecution of any (other) Patent Rights Covering any Xenon Background IP or Collaboration IP anywhere in the Territory. To the extent possible, such notice shall be given sixty (60) days, or if not possible, as soon as practicable (but in any event at least ten (10) Business Days) prior to the next deadline of any action required by Applicable Law or by an officer with authority and jurisdiction in any country where such Patent Right is being prosecuted or maintained. For clarification, a determination by Ivax to (i) abandon a patent application in favour of a continuation or divisional application or the like, or (ii) to narrow the scope of the claimed subject matter, shall not be deemed a determination to cease such Patent Prosecution, unless such action (i) or (ii) [†], in which case Ivax does not have the right to take such action(s) without Xenon's consent, not to be unreasonably withheld.

(c) Upon receipt of a notice from Ivax pursuant to Section 10.3(b), Xenon shall have the right, exercisable by notice in writing to Ivax within forty-five (45) days of receipt of such notice, to assume responsibility, at Xenon's sole cost, for the Patent Prosecution of such Patent Rights (the **"Xenon Prosecution Notice"**), PROVIDED that Xenon shall not knowingly take any action with respect to such Patent Rights that Xenon (acting reasonably) should expect could have an adverse effect on Ivax's rights under this Agreement. Upon receipt of such Xenon Prosecution Notice, Ivax shall forthwith deliver to Xenon all information and documentation relevant to such Patent Prosecution and shall execute all documents as may be reasonably required by Xenon to assume responsibility for same. With respect to any such Patent Rights for which Xenon assumes responsibility for Patent Prosecution under such Xenon Prosecution Notice, such Patent Rights shall continue to constitute Xenon Background Patent Rights or Collaboration Patent Rights, as applicable, for all purposes under this Agreement for so long as such Patent Rights Cover a Product in the applicable jurisdiction; PROVIDED that, without further action by either of the Parties, as of the date that Xenon assumes such responsibility for Patent Prosecution of any such Patent Rights that Cover a Product, Ivax shall be deemed to have granted to Xenon a non-exclusive fully-paid-up perpetual license or license-back (as applicable) in and to such Patent Rights in the applicable jurisdiction, and FURTHER PROVIDED that in the event that such Patent Rights do *not* Cover a Product in the applicable jurisdiction, Ivax shall assign its interest in any such Patent Rights to Xenon. For any such Patent Rights that Xenon elects to file, prosecute and maintain pursuant to this Section 10.3(c), Xenon agrees to keep Ivax fully informed of all material matters with regard to such Patent Prosecution relating thereto, unless such Patent Rights are assigned to Xenon pursuant to this Section 10.3(c). Xenon shall give Ivax a reasonable opportunity to provide comments on any and all filings or material responses relating to such Patent Prosecution, and Xenon shall, in good faith, give reasonable consideration to all suggestions and recommendations of Ivax with respect to such filings or responses.

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10.4 Prosecution and Maintenance of Xenon's Background IP Patent Rights Covering R1150W

(a) Xenon shall have the right and final authority, but not the obligation, to prepare, file, prosecute, maintain and control Patents Rights in Xenon Background IP Covering only R1150W in the Territory (such Patent Rights which are identified in Schedule E, Section II), with patent counsel of its choice. Xenon shall bear the cost of such Patent Prosecution.

(b) Xenon shall not cease Patent Prosecution of any Patent Right Covering any Xenon Background IP Covering R1150W except with Ivax's prior written consent, such consent which will not be unreasonably withheld.

10.5 Infringement by Third Parties

(a) If any Collaboration IP or Xenon Background IP is infringed or misappropriated, as the case may be, by a Third Party, the Party to this Agreement first having knowledge of such infringement or misappropriation, or knowledge of a reasonable probability of such infringement or misappropriation, shall promptly notify the other in writing. The notice shall set forth the facts of such infringement or misappropriation in reasonable detail.

(b) Ivax shall have the first right, but not the obligation, to institute, prosecute, and control with its own counsel any action or other proceeding in the Territory with respect to infringement or misappropriation of Collaboration IP or Xenon Background IP. Xenon shall agree to be named as necessary for Ivax to bring and conduct such action, and Ivax shall provide Xenon with reasonable notice of any such action it commences, consider all Xenon's reasonable comments thereto in good faith, seek to accommodate such comments in initiating, conducting and/or prosecuting such action, and keep Xenon reasonably informed of any significant developments in such action. Xenon shall render, at Ivax's expense, all reasonable assistance as requested by Ivax in connection with any such action initiated, conducted or prosecuted by Ivax. In any such action, Xenon may, at its election and sole expense, be represented by counsel of its own choosing, provided, however, that the control of such action, including whether to initiate any legal proceeding, what strategies to pursue or actions to take in prosecution of any such legal proceeding, and/or the settlement thereof, shall solely be under the control of Ivax. Ivax shall not settle any such action, claim or proceeding brought by Ivax in a manner that Ivax should reasonably expect could have an adverse effect on Xenon's rights under this Agreement or any Xenon Background Patent Rights, or could result in a monetary payment greater than that which a biotechnology company of reasonably similar size to Xenon would consider a *de minimis* monetary payment by or financial loss to Xenon or which would subject Xenon to any form of injunctive or equitable relief, without Xenon's prior written consent, which shall not be unreasonably withheld.

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(c) If Ivax fails to take commercially reasonable efforts to institute, prosecute, and control such action, or proceeding (i) within a period of [†] days after receiving notice of the infringement or misappropriation under Section 10.5(a), or (ii) within a period of [†] days after an initial commercial sale of an infringing or misappropriated Product by such Third Party; or (iii) provided such date occurs after the first such notice of infringement or misappropriation is provided, [†] Business Days before the time limit, if any, set forth in appropriate laws and regulations for filing of such action or proceeding, whichever comes last, Xenon's sole remedy for such failure shall be to have the right, at its own expense, to bring and control such action or proceeding by counsel of its own choice, and, in such case, Ivax shall have the right, at its own expense, to join as a party to such action or proceeding and be represented in same by counsel of its own choice. Xenon shall not settle any such claim or proceeding in a manner that Xenon should reasonably expect could have an adverse effect on Ivax's rights under this Agreement, or could result in more than a *de minimis* monetary payment by or financial loss to Ivax or which would subject Ivax to any form of injunctive or equitable relief, without Ivax's prior written consent, which shall not be unreasonably withheld

(d) The Party prosecuting the action or proceeding has the right to join the other Party as plaintiff as necessary for the prosecuting Party to bring and conduct such action and, in case of joining, the other Party agrees to give the first Party reasonable assistance and authority to file and to prosecute same.

(e) The proceeds of any award of damages or settlement respecting such actions or proceedings shall be applied as follows:

(i) the Party that initiated, conducted, prosecuted, defended, maintained and/or controlled the action shall recoup all of its costs and expenses (including reasonable outside attorneys' fees) incurred in connection with the action, whether the recovery is by settlement or otherwise;

(ii) the other Party then shall, to the extent possible, recover its reasonably documented costs and expenses (including reasonable outside attorneys' fees) incurred in connection with the action, to the extent not previously reimbursed or paid by the prosecuting Party;

(iii) [†]; and

(iv) [†].

(f) If any Third Party alleges invalidity, non-infringement, or unenforceability of any Collaboration IP or Xenon Background IP, including by declaratory judgment or as a defense or counterclaim, in any action to which either Party or both Parties or their respective Affiliates is a party (an "**Invalidity Claim**"), then the Party

having knowledge of such Invalidity Claim shall give notice thereof to the other Party, and the Parties shall promptly discuss the matter and seek to agree on the course of action to respond to such Invalidity Claim. Unless the Parties otherwise agree, Ivax shall have the initial right, in its discretion, to respond to and defend against any such Invalidity Claim, regardless of whether Ivax is initially a Party to such action, PROVIDED that Ivax will consult reasonably with Xenon as to all such defense against the Invalidity Claim and shall consider in good faith all reasonable comments of Xenon with respect thereto. If Ivax does not respond to or defend against any such Invalidity Claim, Xenon shall have the right, in its discretion and subject to Ivax's prior written consent, which shall not be unreasonably withheld, to respond to and defend against any such Invalidity Claim, PROVIDED that Xenon will consult reasonably with Ivax as to all such defense against the Invalidity Claim and shall consider in good faith all reasonable comments of Ivax with respect thereto.

(g) The terms of subsections 10.5(a), (b), (c), (d) and (e) above shall not apply to the [†] circumstances set forth in Section 9.7 above.

10.6 Third Party Claims

(a) In the event that a Third Party shall make any claim, demand, investigation, suit or bring any other proceeding alleging infringement or misappropriation of any Intellectual Property against Xenon or Ivax or their respective Affiliates, Sublicensees or customers with respect to the research Development, Manufacture, marketing, using, offering for sale, sale, import or export for sale or any other Commercialization of Products hereunder (each a "**Third Party Claim**"), the Party first having notice of a Third Party Claim shall promptly notify the other in writing. The notice shall set forth the facts of the Third Party Claim in reasonable detail.

(b) In the event of a Third Party Claim against Ivax, Xenon, or any of their respective Affiliates, Sublicensees or customers, for infringement or misappropriation of any Intellectual Property with respect to the research, Development, Manufacture, marketing, using, offering for sale, sale, import or export for sale or any other Commercialization of Products hereunder, Ivax shall have the right, but not the obligation, to defend and control the defense of such Third Party Claim as well as to initiate and control any counterclaim or other similar action. In the event Xenon is a named defendant in such Third Party Claim or joined as a party by Ivax, Xenon may, at its election and sole expense, be represented in such Third Party Claim by counsel of its own choosing. Xenon shall fully cooperate with Ivax in defense of such Third Party Claim, including by being joined as a party and rendering all assistance reasonably requested in connection with any action taken by Ivax, at Ivax's expense. If Ivax elects (in a written notice delivered to Xenon within a reasonable amount of time after notice of such Third Party Claim) not to defend or control the defense of, or if Ivax otherwise fails to initiate and

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maintain the defense of, any such Third Party Claim, within such time periods so that Xenon is not materially prejudiced by any delays, Xenon may conduct and control the defense of any such Third Party Claim at its own expense, PROVIDED that Xenon shall obtain the written consent of Ivax prior to ceasing to defend, settling or otherwise compromising such claims in a manner that is adverse to Ivax's interests under this Agreement, such consent not to be unreasonably withheld. Each Party shall keep the other Party reasonably informed of all material developments in connection with any such claim, suit, or proceeding, and shall not settle any such claim or proceeding in a manner that likely will materially adversely affect the other Party's rights under this Agreement or which results in a monetary payment by or financial loss to the other Party or which would subject the other Party to any form of injunctive or equitable relief, without the other Party's written consent, which consent shall not be unreasonably withheld.

10.7 Cooperation in Intellectual Property Infringement Proceedings

In the event that either Ivax or Xenon takes action pursuant to Section 10.5 or 10.6 (in such capacity, the "**Acting Party**"), the other Party shall cooperate to the extent reasonably necessary and at the Acting Party's sole expense (other than as specifically set forth in Sections 10.5 and 10.6). Such cooperation shall include, without limitation, providing information, documents, witnesses and consultation to the Acting Party, PROVIDED that such cooperation shall not include the obligation to assert any Patent Rights or other Intellectual Property rights Controlled by the other Party that are not licensed pursuant to this Agreement, or allow the Acting Party to assert any of the same except as otherwise expressly provided in this Agreement.

10.8 Settlement

The Party controlling any such action or proceeding described in Section 10.5 or 10.6 may not settle or consent to an adverse judgment, including any judgment which affects the scope, validity or enforcement of any Patent Right within the Collaboration IP or Xenon Background IP, without the express written consent of the non-controlling Party (such consent not to be unreasonably withheld or delayed), except that Ivax or Xenon may each settle or consent to an adverse judgment in any action described in Section 10.5 or 10.6 without obtaining consent from the other Party unless any such settlement or consent judgment would either (i) impose a financial obligation upon the other Party or its Affiliates, or (ii) admit liability on behalf of the other Party or its Affiliates, or (iii) limit the scope of or invalidate any Patent Right within the Collaboration IP or Xenon Background IP.

10.9 Data Exclusivity

Ivax shall devote Diligent Efforts to obtaining and controlling, at its own expense, applicable data/marketing exclusivity rights with respect to regulatory filings (including clinical, safety and efficacy data) for Market Protected Products, including defense and enforcement of rights against Third Parties seeking marketing authorization approval from a regulatory agency

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(including the FDA, EMA or equivalent) based on such filings. Such rights shall specifically include the right to take action in connection with Third Party applications for marketing authorization for Generic Products that reference any Product pursuant to Title VII of the US Patient Protection and Affordable Care Act, the Hatch-Waxman Act, EU Directive 2004/27/EC and any successor legislation or regulations relating thereto, and all similar foreign legislation with regard to the foregoing.

10.10 Trademarks

Subject to the Xenon Co-Promote Option as set forth under Section 6.3 above, Ivax shall have the right to brand any and all Products owned or Controlled by Ivax using any words, names, symbols, colors, designations or any combinations thereof that function as source identifiers, including any trademarks, trade dress, brand marks, service marks, trade names, brand names, logos or business symbols, as Ivax, in its sole discretion, deems appropriate for Products, which may vary by country or within a country ("**Product Marks**"). As between the Parties, Ivax shall own all rights in the Product Marks and shall register and maintain Product Marks in the countries and regions it determines reasonably necessary. Xenon shall provide all assistance and documents reasonably requested by Ivax in support of the registration and maintenance of the Product trademarks. Except as expressly set forth in this Agreement, neither Party or its Affiliates grants the other Party or its Affiliates any rights in such Party's trademarks, trade dress, brand marks, service marks, trade names, brand names, logos or business symbols.

ARTICLE 11
CONFIDENTIALITY

11.1 Confidential Information

Subject to the provisions of Section 11.2, all Confidential Information disclosed by a Party or its Affiliates to the other Party or its Affiliates during the Term shall not be used by the receiving Party except in connection with the activities contemplated by this Agreement or in order to further the purposes of this Agreement, shall be maintained in confidence by the receiving Party and shall not otherwise be disclosed by the receiving Party to any Third Party or to any Affiliate of the receiving Party, without the prior written consent of the disclosing Party.

11.2 Exceptions

(a) The provisions of Section 11.1 shall not preclude the receiving Party from disclosing Confidential Information of the other Party:

(i) To the extent such Confidential Information is required to be disclosed to governmental or other Regulatory Authorities in order to obtain patents pursuant to this Agreement, or to gain approval to conduct Clinical Trials or to Commercialize Product, but such disclosure may be only to the extent reasonably necessary to obtain such patents or authorizations and in accordance with the terms of this Agreement or as otherwise requested by the Regulatory Authorities;

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(ii) To its agents, consultants, Sublicensees or Affiliates in connection with the Development, Manufacturing or Commercialization of a Product, or to otherwise enable the Party to fulfill its obligations and responsibilities under this Agreement, on the condition that such entities agree to be bound by confidentiality obligations consistent with this Agreement; or

(iii) If required to be disclosed by Applicable Law or court order, PROVIDED that notice is promptly delivered to the non-disclosing Party in order to provide an opportunity to challenge or limit the disclosure obligations.

(b) Specific information shall not be deemed to be within any of the foregoing exclusions merely because it is embraced by more general information falling within these exclusions.

11.3 Certain Disclosures

(a) The Parties agree to develop and distribute a joint press release upon execution of this Agreement by the Parties. Except as set forth in this Agreement or as required by Applicable Law, neither Party shall make any press release or other public announcement or other disclosure to a Third Party concerning the existence of or terms of this Agreement, the subject matter of this Agreement or the activities contemplated hereunder, without the prior written consent of the other Party, which consent shall include agreement upon the nature and text of such release, announcement or other disclosure and shall not be unreasonably withheld or delayed. Each Party agrees to provide to the other Party a copy of any such press release or other public announcement or disclosure as soon as reasonably practicable under the circumstances prior to its scheduled release. Each Party shall have the right to expeditiously (but in any event within [†] review and recommend changes to any such press release or other public announcement or disclosure; PROVIDED that such right of review and recommendation shall only apply for the first time that specific information is to be disclosed, shall not apply to legally required disclosures (provided that the disclosing Party shall give the other Party reasonable advance notice of same and the other Party shall have the right to provide its comments), and shall not apply to the subsequent disclosure of substantially similar information that has previously been disclosed unless there have been material developments relating to the Products since the date of the previous disclosure; PROVIDED, further, that each Party shall provide to the other Party reasonable advance notice of any such subsequent disclosure.

(b) Without limiting the generality of Subsection 11.3(a) above, it is understood that the Parties may make disclosure of this Agreement and the terms hereof in any filings required by the SEC, other governmental authority, or securities exchange,

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or as otherwise required by Applicable Law, may file this Agreement as an exhibit to any filing with the SEC, other governmental authority, or securities exchange, and may distribute any such filing in the ordinary course of its business, PROVIDED, further, that to the maximum extent allowable by the rules and regulations of the SEC, other governmental authority, or securities exchange, and except as required by Applicable Law, Xenon and Ivax each shall seek to redact any Confidential Information set forth in such filings, and each Party shall provide a draft of the redacted version of this Agreement to the other Party no less than [†] prior to filing with the SEC, other governmental authority, or securities exchange, and give reasonable consideration to the other Party's comments regarding any proposed redaction. Further, a Party may disclose this Agreement and the terms hereof in confidence to its existing directors, officers, employees, investors and service providers, and to bona fide prospective investors, merger partners, strategic partners, or acquirors and their respective professional advisors in connection with the negotiation, entry into and/or performance of a business transaction between such parties, including the conduct of due diligence involved in such transaction, provided such Persons agree to be bound by (i) written confidentiality agreements typical for such transactions, or (ii) with respect to attorneys, applicable ethical obligations.

11.4 Publications

If either Party decides that public presentation or publication of certain Confidential Information or other information arising under this Agreement is desirable, including presentation or publication of the results of Development activities (including initiation of and results from Clinical Trials) and/or receipt of Regulatory Approval pertaining to a Product (such information which is hereinafter referred to as a "**Disclosure**"), such Party shall submit a request to make the Disclosure to the JDC or PDC or Ivax following the dissolution of the PDC (as applicable), which shall have the sole authority to authorize the Disclosure by the Party.

11.5 Employee and Advisor Obligations

Xenon and Ivax each agree that they shall provide Confidential Information received from the other Party only to their respective employees, consultants, agents and advisors, or to their Affiliates' employees, consultants, agents and advisors, who have a need to know such Confidential Information to assist such Party in fulfilling its obligations under this Agreement, PROVIDED that such employees, consultants, agents and advisors (i) have agreed, in writing, to treat such information and materials as confidential, (ii) have existing written agreements with such Party, or (iii) are subject to written corporate rules of the Party, that obligate each of the same to treat such information and materials as confidential, and copies of such written agreements are promptly provided to the other Party at such other Party's request.

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11.6 Term of Confidentiality

All obligations of confidentiality imposed under this ARTICLE 11 shall expire [†] years following termination or expiration of this Agreement.

ARTICLE 12
TERM AND TERMINATION

12.1 Term

The term of the Agreement (the "**Term**") commences on the Effective Date and, unless earlier terminated pursuant to the provisions of this ARTICLE 12, will continue until the expiration of all payment obligations to Xenon respecting Products hereunder.

12.2 Bankruptcy, Dissolution and Winding Up

(a) This Agreement shall terminate forthwith at the election of the Party not involved in the Insolvency Proceeding upon the delivery of notice (in accordance with the terms of this Agreement) to the Party which is involved in the Insolvency Proceeding

(i) If an Insolvency Proceeding is commenced by any Party, or if any Party: (1) becomes insolvent, becomes unable to pay its indebtedness or meet its liabilities as the same become due, admits in writing its inability to pay its indebtedness generally, declares any general moratorium on its indebtedness, proposes a compromise or arrangement between it and any class of its creditors, or commits an act of bankruptcy under the BIA, (2) threatens to take any of actions described in this Section 12.2(a)(i), (3) takes any action, corporate or otherwise, to approve, effect, consent to, or authorize any of the actions described in this Section 12.2(a)(i), or (4) otherwise acts in furtherance of, or fails to act in a timely and appropriate manner in defense of, any of the actions described in this Section 12.2(a)(i).

(ii) If an Insolvency Proceeding is commenced against a Party and any of the following events occur: (a) such Party consents to the commencement of such Insolvency Proceeding against it, (b) the case, action, application, petition, or other proceeding commencing the Insolvency Proceeding is not timely controverted by the Party, or (c) the case, action, application, petition, or other proceeding commencing the Insolvency Proceeding continues undismissed, or unstayed and in effect for a period of thirty (30) Business Days after the commencement thereof.

(iii) If any other event occurs which, under the laws of any applicable jurisdiction, has an effect on any Party equivalent or with similar effect to any of the events referred to in either Section 12.2(a)(i), or Section 12.2(a)(ii).

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(b) All rights and licenses granted under or pursuant to this Agreement by the Parties are, and shall otherwise be deemed to be: (i) the grant of rights to use Intellectual Property under s. 65.11(7) of the BIA and s. 32(6) of the CCAA, and (ii) for purposes of Section 365(n) of the U.S. Bankruptcy Code, or any analogous provisions in any other country or jurisdiction, licenses of rights to "intellectual property" as defined under Section 101 of the U.S. Bankruptcy Code. The Parties agree that the Parties, as licensees of such rights under this Agreement, shall retain and may fully exercise all of their rights and elections under Insolvency Laws, the U.S. Bankruptcy Code, or any analogous provisions in any other country or jurisdiction. The Parties further agree that, in the event of the commencement of any Insolvency Proceeding by or against any Party under any Insolvency Laws, the U.S. Bankruptcy Code, or any analogous provisions in any other country or jurisdiction, the Party hereto that is not a Party to such proceeding shall be entitled to a complete duplicate of (or complete access to, as appropriate) any such Intellectual Property and all embodiments of such intellectual property, which, if not already in the non-subject Party's possession, shall be promptly delivered to it (i) upon any such commencement of such Insolvency Proceeding upon the non-subject Party's written request therefor, unless the Party subject to such proceeding elects to continue to perform all of its obligations under this Agreement, or (ii) if not delivered under clause (i) above, following the rejection of this Agreement by or on behalf of the Party subject to such proceeding upon written request therefor by the non-subject Party.

12.3 Termination by the Parties

(a) By Either Party. This Agreement may be terminated by either Party in its entirety, on a Product-by-Product basis, and/or on a country-by-country basis, in the event of:

(i) An unremedied material breach by the other Party or the other Party's Affiliates, in accordance with the provisions of Section 12.4; or

(ii) A mutual written agreement between the Parties.

(b) By Ivax. This Agreement may be terminated by Ivax:

(i) Provided that Ivax, utilizing Diligent Efforts as set out in Section 6.1, has Completed each of the three (3) Phase II Clinical Trials in accordance with Section 6.1(b) (such date and time which shall hereinafter be referred to as the "**Decision Point**"), and Ivax in good faith determines that the results of such Development activities do not warrant further Product Development under the terms and conditions of this Agreement after the Decision Point Ivax may terminate the Agreement in its entirety upon delivery of sixty (60) days advance notice to Xenon; or

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(ii) Notwithstanding Section 12.3(b)(i), in the event of any safety or efficacy issues attributable to the Products that are raised during the Development activities that Ivax in good faith, having devoted Diligent Efforts to resolving such issues, decides to abandon Development of the Products under the terms and conditions of this Agreement, Ivax may terminate the Agreement on a Product-by-Product basis, upon delivery of sixty (60) days advance notice to Xenon.

12.4 Termination for Breach

(a) Upon a material breach of a representation, warranty or a material obligation of this Agreement by a Party or its Affiliates (in such capacity, the "**Breaching Party**"), the other Party (in such capacity, the "**Non-Breaching Party**") may provide written notice (a "**Breach Notice**") to the Breaching Party specifying the material breach. For the purposes of this Section 12.4, a material breach includes, but is not limited to, the following:

(i) Ivax's failure to pay any amount owing to Xenon pursuant to ARTICLE 7 or ARTICLE 8, PROVIDED that Xenon first provides written notice of such failure to Ivax, and Ivax does not remedy such failure within thirty (30) Business Days from the delivery of the written notice; or

(ii) Ivax's failure to comply with the Product Development obligations specifically set forth in Section 6.1, or

(iii) Ivax's failure to comply with the Product Commercialization obligations specifically set forth in Section 6.1,

(unless with respect to Subsection (ii) above, Ivax is prevented from complying with such obligations as a result of Applicable Law or Force Majeure (as defined in Section 16.7), in which event(s) the timelines set forth in such provisions shall automatically be extended for a period of time equivalent to the length of time that such events preventing such compliance were in effect (or such other timeframe as may be agreed to between the Parties under the circumstances)).

(b) For clarity, for purposes of this Section 12.4, a material breach does not include [†].

(c) If:

(i) the Breaching Party fails to cure such material breach during a ninety (90) day period (or, if such material breach, by its nature, is a curable breach that the Parties agree is not curable within that ninety (90) day period, then within such longer period as would be reasonably necessary for a diligent party to cure such material breach) following the date on which the Breach Notice is provided; or

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(ii) such material breach, by its nature, is incurable;

then the Agreement shall terminate, at the option of the Non-Breaching Party, in its entirety, on a Product-by-Product basis and/or on a country-by-country basis, upon written notice to the Breaching Party with immediate effect and without prejudice to the accrued rights of either Party, PROVIDED that if there is a dispute as to whether a material breach has been cured or is incurable, such matter shall be first referred for resolution pursuant to ARTICLE 13 and termination shall be stayed pending resolution of such proceedings, and PROVIDED further that in the event of a termination by Xenon under Section 12.4(a)(ii), subject to Ivax's compliance with Section 12.5 below, such termination shall be Xenon's sole remedy.

(d) Subject to Section 12.5, no payment or agreement to pay under this Agreement shall in any way preclude or limit the rights of either Party to seek the full recovery of its damages or to seek equitable relief for breach of this Agreement by the other Party.

12.5 Events and Restrictions Following Termination

(a) In the event of the termination of this Agreement pursuant to Sections 12.3(b) or 12.4 in its entirety, Ivax under Section 12.3(b) and the Breaching Party under Section 12.4 shall not thereafter:

(i) research, Develop, Manufacture, have Manufactured, market, use, offer to sell, sell, export or import for sale, or otherwise Commercialize any Product under the Xenon Background IP or Collaboration IP,

(ii) assign or otherwise transfer of grant any interest in Xenon Background IP or Collaboration IP to any Third Party, or

(iii) grant a sublicense under any Xenon Background IP or Collaboration IP to any Third Party.

(b) In the event of the termination of this Agreement by Ivax pursuant to Section 12.3(b) or by Xenon pursuant to Section 12.4 in its entirety or on a Product-by-Product basis, and/or on a country-by-country basis (as applicable):

(i) the license granted to Ivax by Xenon hereunder shall terminate with respect to all such terminated Products, and [†], however, Ivax will retain a non-exclusive license under such Xenon Background IP and such Collaboration IP for research purposes only;

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(ii) at Xenon's request Ivax shall grant Xenon (at Xenon's option) (a) a non-exclusive license under the Know-How that falls within the Ivax Termination IP, and (b) subject to (a), an exclusive license under all other Ivax Termination IP (including all study data, results, regulatory filings and Regulatory Approvals relating to same) utilized by Ivax in the research and Development of all such terminated Products within the Territory;

(iii) to the extent permitted by Applicable Law, Ivax shall, at Xenon's cost, transfer and assign to Xenon all Regulatory Approvals for such terminated Products, and all materials submitted to a Regulatory Authority for such approvals, in each country in which this Agreement is terminated and in respect of any Products that are terminated on a Product-by-Product basis, and/or on a country-by-country basis (as applicable), PROVIDED that Ivax may retain a non-exclusive license to such Regulatory Approvals and materials as are applicable to Products in respect of which each paid-up irrevocable license has been granted to Ivax pursuant to Section 8.17 of this Agreement;

(iv) Ivax will sell to Xenon (at a [†] any Product and API for such Product in its possession that is a terminated Product; and

(v) Ivax shall immediately, upon and in accordance with Xenon's written request, either deliver or destroy any Confidential Information relating to each terminated Product, except for one copy which may be retained in its confidential files for archive purposes only, PROVIDED that Ivax may retain such Confidential Information as is applicable to Products in respect of which each paid-up irrevocable license has been granted to Ivax pursuant to Section 8.17 of this Agreement.

(c) In the event of termination of this Agreement by Ivax pursuant to Section 12.3(b) and Xenon subsequently Commercializes the terminated Product, during the period of time such Product is being sold to Third Parties, [†].

12.6 Ongoing Obligations

Except where explicitly provided elsewhere within this Agreement, termination of this Agreement for any reason, or expiration of this Agreement, will not affect:

(i) obligations of the Parties, including the payment of any amounts payable pursuant to the provisions of ARTICLE 7 and ARTICLE 8; or

(ii) rights and obligations of the Parties, which, from the context thereof, are intended to survive termination or expiration of this Agreement, including Sections 8.17, 9.4, 9.5, 12.5, 14.5, 16.3-16.16; Articles 11, 13, 15; and Articles 7 and 8 (each in accordance with their terms).

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12.7 Dispute Resolution

Termination under this ARTICLE 12 for whatever reason will be automatically stayed for the duration of any proceedings initiated under ARTICLE 13, and any applicable cure periods shall commence upon the resolution of such proceedings.

ARTICLE 13
DISPUTE RESOLUTION

13.1 Mediation

Except as otherwise provided under Section 13.2 and except for an application for an injunction, and with the exception of any matter properly considered by a Joint Committee, if any dispute, disagreement, claim or controversy (in each case, a "**Disputed Matter**") exists between the Parties arising out of or relating to any provision of this Agreement then such Disputed Matter shall be submitted to the following mediation process:

(a) Internal Mediation. The Disputed Matter shall first be referred jointly to two (2) designees, one of each of Ivax and Xenon, who shall be a senior executive officer of each Party, who shall meet personally and attempt in good faith using their best efforts to resolve the Disputed Matter. If such designees fail to resolve the Disputed Matter within thirty (30) Business Days (or longer if the Parties mutually agree) after referral of the matter to them, the Parties shall proceed to the next stage of the dispute resolution procedure.

(b) Outside Mediation. Upon written notice and within fifteen (15) Business Days after the conclusion of the internal mediation described in Section 13.1(a), either of the Parties may elect to utilize a non-binding resolution procedure whereby the Parties engage a Third Party outside mediator. The mediation shall proceed at such times, and in such place, in such manner and with a mediator as the Parties, acting in good faith, may agree. If the Parties cannot agree upon a matter pertaining to the mediation, neither Party shall be obliged to proceed with outside mediation, and the mediation will be deemed to have failed. Each Party may be represented at the mediation by external legal counsel. If the matter cannot be resolved by mediation, within ten (10) Business Days after the failed outside mediation a senior executive officer of each Party shall meet and try again to resolve the matter. Except as provided under Section 13.2 below, the Parties are then free to pursue legal and equitable remedies available to them and the mediation proceedings will have been without prejudice to the legal position of any affected Party. Each Party shall bear its respective costs incurred in connection with the mediation procedure, except that they shall share equally the fees and expenses of the mediator and the costs of the facility for the mediation.

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(c) The Parties agree not to have the Ontario Commercial Mediation Act, 2010, apply to the mediation proceedings.

13.2 Audit—Binding Determinations

In the event that any dispute involving the determination of any amounts due to either Party pursuant to the audit process set out in Section 8.9 has not been resolved pursuant to the procedures set out in Section 13.1, then the Parties shall agree on the appointment of one (1) internationally-recognized independent accounting firm to determine the matter, which determination shall be final and binding on the Parties.

ARTICLE 14
REPRESENTATIONS AND WARRANTIES

14.1 Representation of Authority; Consents

Each Party represents and warrants to the other that:

(i) It is duly incorporated and organized and validly existing under the laws of its jurisdiction of incorporation;

(ii) It has full right, power and authority to enter into this Agreement and to perform its obligations under this Agreement;

(iii) This Agreement has been duly executed by such Party and constitutes a legal, valid and binding obligation of such Party, enforceable in accordance with its terms;

(iv) The execution, delivery and performance of this Agreement by such Party has been duly authorized by all necessary corporate action and does not and will not during the Term: (A) violate any Applicable Law; nor (B) conflict with or constitute a default under any agreement, instrument or understanding, oral or written, to which it or any of its Affiliates is a party or by which it or such Affiliates may be bound; nor (C) conflict with or violate such Party's corporate charter and bylaws; and

(v) No consents, approvals or authorizations under Applicable Law or from Third Parties are required to be obtained in connection with the execution, delivery and performance of this Agreement.

14.2 Representations and Warranties by Xenon.

Xenon represents and warrants to Ivax as of the Effective Date:

(a) all Patent Rights that are included in the Xenon Background Patent Rights existing as of the Effective Date are listed in Schedule E;

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(b) to Xenon's knowledge (i) the Xenon Background IP rights are not being infringed by any Third Party, (ii) no Xenon Background IP rights have been found by a court or administrative body of competent jurisdiction to be invalid or unenforceable; (iii) the Xenon Background IP rights are not subject to any pending or overtly threatened re-examination, re-issue, opposition, interference, challenge or litigation proceeding, and Xenon has received no written threat or notice of the initiation of any of the foregoing proceedings; (iv) [†]; and (v) [†];

(c) to Xenon's knowledge, [†];

(d) [†];

(e) (i) [†]; (ii) [†]; and (iii) [†];

(f) [†];

(g) [†];

(h) [†];

(i) [†];

(j) [†];

(k) [†];

(l) Xenon has not received any notice from any Third Party that the Development, Manufacture, or Commercialization of the Products in the Territory infringes or misappropriates any Intellectual Property rights of any Third Party.

(m) [†];

(n) [†];

(o) [†];

(p) there are no claims, judgments or settlements against or owed by Xenon;

(q) [†];

(r) [†]; and

(s) [†].

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14.3 Ivax Covenant

Ivax covenants to Xenon that at any time on or after the date that Ivax (or any Person acting on behalf of Ivax) Commences a Phase IIb Trial with any Product, upon receipt from Xenon of an IPO Notice:

(a) Ivax will purchase (the "**IPO Purchase**") that number of Xenon Stock from Xenon as part of the IPO on the same offering price (the "**IPO Price**") and on economic terms and conditions no less favourable than those provided to any public investors in the IPO that is equal to the lesser of:

(i) $20,000,000 divided by the IPO Price, if such IPO occurs on a date on or after the Commencement of a Phase III Trial with any Product, or $10,000,000 divided by the IPO Price, if such IPO occurs on a date prior to the Commencement of a Phase III Trial with any Product; and

(ii) 19% of the issued and outstanding Xenon Stock, on a post-IPO basis; and

(iii) the number of Xenon Stock specified in the IPO Notice by Xenon; and

(b) Ivax will take all necessary actions as reasonably requested by Xenon to complete the IPO Purchase, including but not limited to providing all required information, making all filings and executing all such further documents as may be reasonably requested by the relevant securities commissions, stock exchanges and other regulatory authorities or underwriters or agents for the IPO.

For the purposes of interpretation of Section 14.3 above:

"**Commences a Phase IIb Trial**" shall mean the first dosing of the first human subject in the particular Phase II Trial that, [†];

"**IPO**" means the initial public offering of the Xenon stock and the commencement of the listing and trading of Xenon Stock; PROVIDED that (i) such offering is made at a minimum price of $[†] per share of Xenon Stock (subject to adjustment for any share consolidation or subdivision or the grant of any stock dividends subsequent to the date hereof) and for minimum gross proceeds (before underwriting discounts, commission, expenses of issue and fees of not less than $[†]), or such other minimum price per share or gross proceeds amount that is otherwise approved by Xenon shareholders; and (ii) the shares of Xenon Stock are listed on a recognized senior stock exchange (including, without limitation, The Toronto Stock Exchange or NASDAQ).

"**IPO Notice**" means the written notice that Xenon may at its option (but has no obligation to) send to Ivax informing Ivax that Xenon is contemplating an IPO and will require Ivax to purchase shares of Xenon Stock pursuant to Section 11.3(a) above.

"**IPO Price**" has the meaning set out in Section 11.3(a) above.

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"**IPO Purchase**" has the meaning set out in Section 11.3(a) above.

"**Xenon Stock**" means the class of shares in the capital of Xenon or its successor offered in the IPO to the public investors.

14.4 Employee and Consultant Obligations

(a) Each Party represents and warrants to the other that, unless prohibited by, or inconsistent with, Applicable Law all of its employees, officers, consultants and advisors and all of its Affiliates' employees, officers, consultants and advisors who are supporting the performance of its obligations under this Agreement shall have executed or will have executed agreements or have existing obligations under law or such Party's written corporate rules:

(i) Requiring assignment to such Party of all Intellectual Property made during the course of and as the result of their association with such Party; and

(ii) Obligating the individual to maintain as confidential such Party's Confidential Information as well as confidential information of any Person which such Party may receive, to the extent required to support such Party's obligations under this Agreement.

(b) Each Party represents and warrants that, to its knowledge, as of the Effective Date none of its employees and none of its Affiliates' employees who are involved in the performance of its obligations hereunder are, as a result of the nature of such obligations to be conducted by such Party set forth herein, in violation of any covenant in any contract with a Third Party relating to non-disclosure of proprietary information, non-competition or non-solicitation.

14.5 Disclaimer of Warranty

(a) Except as expressly set forth in this Agreement, nothing in this Agreement shall be construed as a representation made or warranty given by either Party or its Affiliates:

(i) that the Intellectual Property of a Party is not infringed by any Third Party, or that the practice of the Intellectual Property rights of a Party does not infringe any Intellectual Property rights of any Third Party; or

(ii) that any patents will issue based on pending applications or that any such pending applications or patents issued thereon will be valid.

(b) EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, EACH PARTY EXPRESSLY DISCLAIMS, WAIVES, RELEASES, AND RENOUNCES ANY WARRANTY, EXPRESS OR IMPLIED, STATUTORY

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OR OTHERWISE, INCLUDING ANY WARRANTY OF MERCHANTABILITY, DURABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND WARRANTIES ARISING FROM USAGE OF TRADE OR COURSE OF DEALING, RELATING TO PRODUCT OR OTHER PRODUCT OR SERVICE PROVIDED BY EITHER PARTY TO THE OTHER HEREUNDER.

ARTICLE 15
INDEMNIFICATION

15.1 Indemnity By Ivax

Ivax agrees to defend Xenon at Ivax's cost and expense, and will indemnify and hold Xenon and its directors, officers, employees and agents (the "**Xenon Indemnified Parties**") harmless from and against any action, suit, liabilities, losses, costs, damages, claims, demands, encumbrances, fees or expenses (including reasonable legal fees and disbursements) (collectively, a "**Loss**") arising out of any Third Party claim relating to:

(a) Any breach by Ivax of any of its representations, warranties or obligations pursuant to this Agreement;

(b) The negligence or wilful misconduct of Ivax; or

(c) Any injury, damage or loss resulting from any Product Commercialized by Ivax or its Sublicencees, except to the extent that Xenon is obliged to indemnify Ivax pursuant to the provisions of Section 15.2.

In the event of any such claim against the Xenon Indemnified Parties by any Third Party, Xenon shall promptly notify Ivax in writing of the claim and Ivax shall manage and control, at its sole expense, the defense of the claim and its settlement, keeping Xenon reasonably advised of the status of the defense and/or settlement. No settlement shall be finalized without obtaining Xenon's prior written consent, which shall not be unreasonably withheld, except that, in the case of a settlement that does not require an admission or action on the part of Xenon, subject to compliance with Section 10.8, Xenon's consent shall not be required so long as Xenon is unconditionally released from all liability in such settlement. The Xenon Indemnified Parties shall cooperate with Ivax and may, at their option and expense, be represented in any such action or proceeding. Ivax shall not be liable for any litigation costs or expenses incurred by the Xenon Indemnified Parties without Ivax's prior written authorization, unless Ivax is in breach of any of its obligations pursuant to this Section 15.1. In addition, Ivax shall not be responsible for the indemnification or defense of any Xenon Indemnified Party to the extent any Third Party claims arises from any negligent or intentional acts or omissions by any Xenon Indemnified Party, or the breach by Xenon of any obligation, representation or warranty under this Agreement, or any claims compromised or settled without Ivax's prior written consent.

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15.2 Indemnity by Xenon

Xenon agrees to defend Ivax at Xenon's cost and expense, and will indemnify and hold Ivax and their respective directors, officers, employees and agents (the "**Ivax Indemnified Parties**") harmless from and against any action, suit, liabilities, losses, costs, damages, claims, demands, encumbrances, fees or expenses (including reasonable legal fees and disbursements) arising out of any Third Party claim relating to:

(a) Any breach by Xenon of any of its representations, warranties or obligations pursuant to this Agreement;

(b) The negligence or wilful misconduct of Xenon; or

(c) In the event Xenon exercises its option to co-promote pursuant to Section 6.3, any of Xenon's detailing activities under such co-promote.

In the event of any such claim against the Ivax Indemnified Parties by any Third Party, Ivax shall promptly notify Xenon in writing of the claim and Xenon shall manage and control, at its sole expense, the defense of the claim and its settlement, keeping Ivax reasonably advised of the status of the defense and/or settlement. No settlement shall be finalized without obtaining Ivax's prior written consent, which consent shall not be unreasonably withheld, except that, in the case of a settlement that does not require an admission or action on the part of Ivax, subject to compliance with Section 10.8, Ivax's consent shall not be required so long as Ivax is unconditionally released from all liability in such settlement. The Ivax Indemnified Parties shall cooperate with Xenon and may, at their option and expense, be represented in any such action or proceeding. Xenon shall not be liable for any litigation costs or expenses incurred by the Ivax Indemnified Parties without Xenon's prior written authorization, unless Xenon is in breach of any of its obligations pursuant to this Section 15.2. In addition, Xenon shall not be responsible for the indemnification or defense of any Ivax Indemnified Party to the extent any Third Party Claim arises from any negligent or intentional acts or omissions by any Ivax Indemnified Party, or the breach by Ivax of any obligation, representation or warranty under this Agreement, or any claims compromised or settled without Xenon's prior written consent.

15.3 Limitation of Liability

EXCEPT FOR FRAUD, GROSS NEGLIGENCE OR INTENTIONAL MISCONDUCT, IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER OR ANY OF ITS AFFILIATES FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, AGGRAVATED OR EXEMPLARY DAMAGES (INCLUDING LOST PROFITS, BUSINESS OR GOODWILL) SUFFERED OR INCURRED BY SUCH OTHER PARTY OR ITS AFFILIATES, WHETHER BASED UPON A CLAIM OR ACTION OF CONTRACT, WARRANTY, NEGLIGENCE, STRICT LIABILITY OR OTHER TORT, OR OTHERWISE, ARISING OUT OF THIS AGREEMENT. THE FOREGOING SENTENCE SHALL NOT LIMIT THE OBLIGATIONS OF EITHER PARTY TO INDEMNIFY AN INDEMNIFIED PARTY FROM AND AGAINST THIRD PARTY CLAIMS UNDER THIS ARTICLE 15.

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15.4 Method of Asserting Claims

In the event that any written claim or demand for which a Party (the "**Indemnifying Party**") would be liable to the other Party (the "**Indemnified Party**") hereunder is asserted against or sought to be collected from any Indemnified Party by a Third Party, such Indemnified Party shall promptly, but in no event more than [†] Business Days following such Indemnified Party's receipt of such claim or demand, notify the Indemnifying Party of such claim or demand and the amount or the estimated amount thereof to the extent then feasible (the "**Claim Notice**"). The failure to provide such notice will not affect any rights under this Agreement except to the extent that the Indemnifying Party is materially prejudiced by such failure.

15.5 Notice Period

The Indemnifying Party shall have [†] days from the delivery or mailing of the Claim Notice (the "**Notice Period**") to notify the Indemnified Party whether or not it desires to defend the Indemnified Party against such claim or demand. An election to assume the defense of such claim or demand shall not be deemed to be an admission that the Indemnifying Party is liable to the Indemnified Party in respect of such claim or demand. All costs and expenses incurred by the Indemnifying Party in defending such claim or demand shall be a liability of, and shall be paid by, the Indemnifying Party; PROVIDED, however, that the amount of such expenses shall be a liability of the Indemnifying Party hereunder, subject to the limitations set forth in this ARTICLE 15.

15.6 Reimbursement

In the event that it is ultimately determined that the Indemnifying Party is not obligated to indemnify, defend or hold the Indemnified Party harmless from and against any Third Party claim, the Indemnified Party shall reimburse the Indemnifying Party for any and all costs and expenses (including reasonable attorney's fees and court costs) incurred by the Indemnifying Party in its defense of the Third Party claim.

15.7 Settlement

The Indemnified Party shall not settle a Third Party claim or demand without the consent of the Indemnifying Party, which shall not be unreasonably withheld. The Indemnifying Party may settle any claim or demand for monetary damages without obtaining consent from the Indemnified Party; it being understood that the Indemnifying Party shall not, without the prior written consent of the Indemnified Party, which shall not be unreasonably withheld, settle, compromise or offer to settle or compromise any such claim or demand on a basis which would result in the imposition of a consent order, injunction or decree that would restrict the future activity or conduct of the Indemnified Party thereof.

15.8 Grant of Access and Assistance to Indemnifying Party

To the extent the Indemnifying Party shall control or participate in the defense or settlement of any Third Party claim or demand, the Indemnified Party will give the Indemnifying Party and its

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counsel access to, during normal business hours, the relevant business records and other documents, and shall permit them to consult with the employees and counsel of the Indemnified Party. The Indemnified Party shall use its reasonable efforts to assist in the defense of all such claims.

15.9 Conflict of Interest or Failure to Defend

If the Indemnifying Party shall fail to undertake in a timely manner the defense of any Third Party claim or it is determined that representation by the Indemnifying Party's counsel of both the Indemnifying Party and the Indemnified Party may present a conflict of interest, the Indemnified Party shall have the right to undertake the defense or settlement thereof at the Indemnifying Party's expense, subject to counsel for Indemnified Party being reasonably acceptable to Indemnifying Party. If the Indemnified Party assumes the defense of any such claim or proceeding and proposes to settle such claim or proceeding prior to a final judgment thereon or to forgo any appeal with respect thereto, then the Indemnified Party shall give the Indemnifying Party timely written notice and the Indemnifying Party shall have the right to participate in the settlement or assume or reassume the defense of such claim or proceeding.

15.10 Insurance Proceeds

Any indemnification hereunder shall be made net of any insurance proceeds recovered by the Indemnified Party; PROVIDED that if, following the payment to such Indemnified Party of any amount under this ARTICLE 15, such Indemnified Party recovers any insurance proceeds in respect of the claim for which such indemnification payment was made, the Indemnified Party shall promptly pay an amount equal to the amount of such proceeds (but not exceeding the amount of such indemnification payment) to the Indemnifying Party.

15.11 Insurance

Prior to its first use of a Product in a human, Ivax shall obtain[†] insurance (including product liability insurance) or self-insure with respect to its activities hereunder[†] in such amount as is consistent with the standards in the pharmaceutical industry. All such insurance shall be maintained at Ivax's cost and Ivax shall from time to time provide to the Xenon certificates of insurance or such other evidence of insurance as Xenon may reasonably request.

ARTICLE 16
GENERAL

16.1 Assignment

Except as hereinafter provided in this Section 16.1, this Agreement shall not be assigned in whole or in part by either Party without the prior written consent of the other Party. Any attempt by either Party to assign this Agreement without such consent shall be null and void and of no effect PROVIDED that either Party may assign this Agreement without the consent of the other Party:

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(a) in whole or in part to any Affiliate of a Party, PROVIDED that the assigning Party notifies the other Party in writing within twenty (20) Business Days of such assignment and the assignee promptly enters into a written agreement with the other Party wherein the assignee agrees to assume responsibility for and be bound by all of the terms of this Agreement in addition to the assigning Party, which shall continue to be bound by such terms; or

(b) in whole in connection with a transfer or sale of all or substantially all of the assets or business of a Party or in the event of such Party's merger or amalgamation with another Person or other business combination (a "**Change of Control Event**") provided that such Party or its successor (as applicable) gives notice in writing to the other Party within ten (10) Business Days following such Change of Control Event;

(c) No assignment shall release any Party from responsibility for the performance of any accrued obligation of such Party hereunder; and

(d) This Agreement shall be binding upon and enforceable against the successor to or any permitted assignees from either of the Parties hereto.

16.2 Change of Control Event

(a) Notwithstanding anything in this Agreement to the contrary, in the event of a Change of Control of Xenon, Ivax will not be obligated to disclose any Confidential Information to the Successor Entity during the remainder of the Agreement Term (but notwithstanding the foregoing shall continue to provide the royalty reports required under ARTICLE 8 of this Agreement and shall provide reasonable summaries of Development and Commercialization status and efforts as contemplated under Section 6.2 of this Agreement), and Ivax may request the immediate return or destruction of Confidential Information previously disclosed to Xenon by Ivax. Further, notwithstanding anything in this Agreement to the contrary, within ninety (90) days of the date of any Change of Control of Xenon, Ivax may: (i) terminate the JDC or PDC, as applicable, in its sole discretion, and (ii) terminate the obligation under Section 14.3 to participate in Xenon's IPO if not then exercised by Xenon, in Ivax's sole discretion.

(b) Notwithstanding anything to the contrary in Section 6.3, in the event of a Change of Control Event of Xenon in which the surviving entity is an Unacceptable Person (as defined below), then [†]. Accordingly, the Parties further agree as follows:

In the event of an Anticipated Change of Control (as defined below):

(i) Xenon will in confidence provide notice to Ivax of an Anticipated Change of Control, and in such notice will request that Ivax deliver to Xenon a list of the names of Persons that as of the date of such notice, Ivax has determined are Unacceptable Persons; and

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(ii) Ivax shall deliver to Xenon within [†] Business Days following the date that Xenon delivers such notice and request to Ivax the list of Unacceptable Person.

"Unacceptable Person" or "Unacceptable Persons" means (1) [†]; or (2) [†]:

(i) [†]; or

(ii) [†].

"**Anticipated Change of Control**" means (i) an offer submitted to Xenon by a Third Party whereunder such Third Party has indicated that it desires to enter into discussions with Xenon that, if such discussions successfully conclude, would result in a Change of Control of Xenon; or (ii) a good faith determination by the Board of Directors of Xenon, as evidenced by the minutes of such meeting of the Board of Directors or a resolution consented to in writing by all of the Directors of Xenon, that Xenon Management is to initiate discussions with one or more Third Parties in furtherance of a Change of Control of Xenon.

16.3 Governing Law

This Agreement shall be construed and the respective rights of the Parties determined according to the substantive laws of [†] notwithstanding any provisions governing conflict of laws under such law to the contrary. Subject to ARTICLE 13, any Disputed Matter shall be brought exclusively in a court of competent jurisdiction located in [†]. Each Party irrevocably waives any right to, and will not oppose any such [†] action or proceeding on any jurisdictional basis, including *forum non conveniens*, and will not oppose the enforcement of any judgment or other duly obtained order from [†]. Each Party irrevocably and unconditionally attains and submits to the jurisdiction of [†], and agrees to service of process issued or authorized by, such court. **EACH PARTY HEREBY IRREVOCABLY WAIVES ITS RIGHT TO A JURY TRIAL.**

16.4 United Nations Convention

THE PARTIES EXPRESSLY DISCLAIM AND EXCLUDE THE APPLICATION OF THE UNITED NATIONS CONVENTION ON CONTRACTS FOR THE INTERNATIONAL SALE OF GOODS.

16.5 Business Day

In the event that an obligation to be performed under this Agreement falls due on a day that is not a Business Day, the obligation shall be deemed due on the next Business Day thereafter.

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16.6 Notices

Notices, invoices, communications, and payments hereunder shall be deemed made and given three (3) days after sending if sent by registered or certified envelope, postage prepaid, and one (1) day after sending if sent by courier or by facsimile transmission, and addressed to the Party to receive such notice, invoice, or communication at the address given below, or such other address as may hereafter be designated by notice in writing by one Party to the other from time to time:

To Xenon:	Xenon Pharmaceuticals Inc. 3650 Gilmore Way Burnaby, BC CANADA V5G 4W8 Attention: President and Chief Executive Officer Facsimile: 604-484-3450
With a copy (which shall not constitute notice) to:	Xenon Pharmaceuticals Inc. 3650 Gilmore Way Burnaby, BC V5G 4W8 Attention: General Counsel and Corporate Secretary Facsimile: 604-484-3450
To Ivax:	Ivax International GmbH Alpenstrasse 2 8640 Rapperswil SWITZERLAND Attention: Managing Director Facsimile: 41-55-220-1049
With a copy (which shall not constitute notice) to:	Teva Pharmaceuticals 1090 Horsham Road North Wales, PA 19454 USA Attention: Chief Legal Officer Facsmile: 215-293-6499

16.7 Force Majeure

No failure or omission by either Party in the performance of any obligation of this Agreement shall be deemed a breach of this Agreement or create any liability if the same shall arise from

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any cause or causes beyond the reasonable control of such Party, including the following: acts of God; acts or omissions of any government; any inordinate or unanticipated delays in the regulatory review or governmental approval processes that are within the sole control of such government or governmental agency; any rules, regulations or orders issued by any governmental authority or by any officer, department, agency or instrumentality thereof; fire; storm; flood; earthquake; accident; war; rebellion; insurrection; riot; and invasion; PROVIDED that such failure or omission resulting from one of the above causes is corrected as soon as is practicable after the occurrence of one or more of the above mentioned causes by the Party claiming force majeure taking all reasonable steps within its power to resume compliance with its obligations with the least possible delay. The Party claiming force majeure shall notify the other Party with notice of the force majeure event as soon as practicable, but in no event longer than ten (10) Business Days after its occurrence, which notice shall reasonably identify such obligations under this Agreement and the extent to which performance thereof will be affected. In such event, the Parties shall meet promptly to determine an equitable solution to the effects of any such event.

16.8 Independent Contractors

It is understood and agreed that the relationship between the Parties is that of independent contractors and that nothing in this Agreement shall be construed as authorization for either Xenon or Ivax to act as agent for the other.

16.9 No Strict Construction

This Agreement has been prepared jointly and shall not be strictly construed against either Party.

16.10 No Implied Waivers; Rights Cumulative

No failure on the part of Xenon or Ivax to exercise, and no delay in exercising, any right, power, remedy or privilege under this Agreement, or provided by statute or at law or in equity or otherwise, shall impair, prejudice or constitute a waiver of any such right, power, remedy or privilege or be construed as a waiver of any breach of this Agreement or as an acquiescence therein, nor shall any single or partial exercise of any such right, power, remedy or privilege preclude any other or further exercise thereof or the exercise of any other right, power, remedy or privilege.

16.11 Severability

If any provision hereof should be held invalid, illegal or unenforceable in any respect in any jurisdiction, the Parties hereto shall substitute, by mutual consent, valid provisions for such invalid, illegal or unenforceable provisions which valid provisions in their economic effect are sufficiently similar to the invalid, illegal or unenforceable provisions that it can be reasonably assumed that the Parties would have entered into this Agreement with such valid provisions. In case such valid provisions cannot be agreed upon, the invalid, illegal or unenforceable of one or several provisions of this Agreement shall not affect the validity of this Agreement as a whole.

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16.12 Execution in Counterparts

This Agreement may be executed in counterparts, each of which counterparts, when so executed and delivered, shall be deemed to be an original, and all of which counterparts, taken together, shall constitute one and the same instrument. For purposes of execution, a copy of this Agreement or any amendment hereto will be deemed an original (including a printed copy of a PDF file delivered via email or a facsimile transmitted telephonically via a fax machine). Notwithstanding the foregoing, the Parties shall deliver original execution copies of this Agreement to one another as soon as practicable following such execution.

16.13 No Third Party Beneficiaries or Obligors

No Person other than Ivax, Xenon and their respective permitted successors and assigns hereunder shall be deemed an intended beneficiary hereunder, nor have any right to enforce any obligation of any Party to this Agreement, nor shall any Person other than Ivax and Xenon and their respective permitted successors and assigns have any obligations to any Party under this Agreement.

16.14 Entire Agreement

This Agreement contains the entire agreement of the Parties with respect to the matters referred to herein.

16.15 Amendment

This Agreement, including the Schedules hereto (with the exception of Schedule C, which may be amended pursuant to Section 2.3), may only be amended by a written document duly executed by authorized signatories of each of the Parties.

16.16 Compliance

The Parties shall comply fully with all Applicable Law in connection with their respective activities under this Agreement.

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IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date.

XENON PHARMACEUTICALS INC.

By: /s/ Simon Pimstone
Name: Simon Pimstone
Title: President and Chief Executive Officer

IVAX INTERNATIONAL GMBH

By: /s/ Naama Baram
Name: Naama Baram
Title: General Manager

By: /s/ R. David Koch
Name: R. David Koch
Title: Managing Officer

SCHEDULE A - XEN402

[†]

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

SCHEDULE B - XEN403

[†]

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

[†]:

(1) [†],

(2) [†], and

(3) [†].

[†].

[†].

[†].

The Phase II Clinical Trials and/or Phase III Clinical Trials may include the Indications and subject genotypes as set out in the table below.

XEN402 Formulation	**Indication**	**Genotype**
Topical	Primary erythromelalgia	**[†]**
	[†]	**[†]**
	[†]	**[†]**
Oral	**[†]**	**[†]**
	[†]	**[†]**
	[†]	**[†]**

Selection of Clinical Trials and protocols will be set out in the Collaborative Development Plan.

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SCHEDULE D - IVAX BACKGROUND PATENT RIGHTS

There are no Ivax Background Patent Rights as of the Effective Date.

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SCHEDULE E - XENON BACKGROUND PATENT RIGHTS

Entry	Xenon File No.	PCT Application Publication No. / Filing Date	Title	Priority Application/ Priority Date	Active Jurisdictions (via PCT National/Regional Phase)
Section I: XEN402 and XEN403 Product Patent Applications					
[†]	[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]	[†]
[†]	[†]	[†]	[†]	[†]	[†]
Section II: Diagnostics for SCN9A Variants					
[†]	[†]	[†]	[†]	[†]	[†]

* Denotes non-PCT (direct) national filing (conducted simultaneously with the corresponding PCT application, as applicable).

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SCHEDULE F - XENON CO-PROMOTION RIGHTS

Xenon Co-Promotion Right

Subject to the following provisions, Xenon shall have the exclusive right and option, at its election, to co-Promote the Products within and throughout the Co-Promotion Territory (as defined below) (the "**Co-Promotion Right**"):

1. Definitions**.** Unless otherwise specifically defined in this Schedule F, capitalized terms herein shall have the meaning set forth in the Agreement. For purposes of this Schedule F:

   "**Arbitration**" shall have the meaning set forth in paragraph 3(c) below.

   "**Co-Promotion Agreement**" shall have the meaning set forth in paragraph 12 below.

   "**Co-Promotion Expenses**" shall mean [†].

   "Co-Promotion Territory" shall mean the US and its territories (including Puerto Rico).

   "**Detail**" or "**Detailing**" shall mean an interactive personal visit and discussion by a sales representative with a Target Prescriber during which a full presentation emphasizing the features and functions of the Product is undertaken.

   "Promotion" shall mean those activities necessary to implement and carry out the Promotional Plan. When used as a verb, "**Promote**" or "**Promoting**" means to engage in Promotion.

   "Promotional Plan" shall mean the annual promotional plan that will be developed by the Promotional Committee for the Product in the Co-Promotion Territory that is the subject of Xenon's Co-Promotion Right, such plan to take into consideration the elements set forth in Annex A attached hereto.

   "**Target Prescriber**" shall mean the physicians or other healthcare provider identified in the Promotion Plan.

2. Co-Promotion Interest. Xenon's co-promotion interest shall be at least [†] percent ([†]%) and up to [†] percent ([†]%) (the "**Co-Promotion Interest**") with respect to the total Promotion for each Product sold within the Co-Promotion Territory.

3. [†] Notice. [†] following the [†], Ivax will provide notice in writing to Xenon respecting the conditions that, in accordance with standard practices in the pharmaceutical industry for Promoting products of a comparable commercial potential, in Ivax's reasonable opinion, will indicate that Xenon is able to exercise its right to co-Promote Products in the Co-Promotion Territory ("**Ivax Conditions**").

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(a) Ivax's Objective Criteria. The Ivax Conditions will be reasonable and objective criteria that, provided they are met by Xenon, will satisfy Ivax in its reasonable opinion that Xenon is able to co-Promote with Ivax in the Co-Promotion Territory those Products that (as of the date of the notice to Xenon referenced in this paragraph 3 above) Ivax anticipates will be the subject matter of the anticipated NDA Filing referenced in paragraph 4 below. While the details of the Ivax Conditions will be fully set forth at the time set forth above, and such details are solely within Ivax's discretion to determine at that time, the subject matter of the Ivax Conditions will be the following:

(i) Xenon's financial position at the time of the anticipated US Product launch date of such Products;

(ii) Xenon's number and qualifications of managers for co-promotion activities that must be employed or otherwise retained by Xenon no fewer than a pre-determined number of days prior to the anticipated US Product launch date;

(iii) Xenon's number and qualifications of sales representatives for co-promotion activities that must be employed or otherwise retained by Xenon no fewer than a pre-determined number of days prior to the anticipated US Product launch date; and

(iv) Any such other reasonable and objective criteria consistent with standard practices in the pharmaceutical industry for Promoting products in the Co-Promotion Territory, including the existence of a compliance program.

(b) Xenon's Right to Protest. Xenon will provide a response to Ivax, within **[†]** following receipt of the Ivax Conditions, as to whether Xenon agrees that the Ivax Conditions are reasonable and objective criteria as provided above, and an appropriate prerequisite for Xenon to exercise its right to co-Promote the relevant Products in the Co-Promotion Territory as set forth in paragraph 6 below. In the event Xenon does not agree that the Ivax Conditions are such reasonable and objective criteria, Xenon will provide written notice of its position to Ivax ("**Xenon Notice**"), and the Parties shall endeavour in good faith to agree on the Ivax Conditions as promptly as possible. Where the Parties cannot agree upon such Ivax Conditions within **[†]** of the Xenon Notice, Xenon shall have the right to submit this matter to Arbitration as defined in paragraph 3(c), for a final and binding determination.

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(c) Matters referred pursuant to paragraph 3(b) and paragraph 12 shall be resolved through binding arbitration in accordance with this paragraph 3(c) and under [†]. The proceedings and decisions of the arbitrator shall be confidential, final and binding on the Parties. The arbitration shall take place in [†] and will be conducted by one (1) arbitrator who shall be reasonably acceptable to the Parties and who shall be appointed in accordance with [†] rules. If the Parties are unable to select an arbitrator within ten (10) Business Days of the submission of the relevant matter to arbitration, then the arbitrator shall be appointed in accordance with [†] rules. The arbitration shall be conducted at a pace to render a decision by the arbitrator as soon as practicable, and in the event of arbitration pursuant to paragraph 12, no later than ninety (90) days after the selection of the arbitrator. Any arbitrator chosen hereunder shall have educational training and industry experience sufficient to demonstrate a reasonable level of scientific, financial, medical and industry knowledge relevant to the particular dispute. The Parties agree that the arbitrator will have the discretion to assess all reasonable expenses of arbitration (including arbitration fees, expert fees, arbitration costs and attorney's fees) against the losing Party. Any decision rendered in such arbitration may be enforced by either Party in any state, provincial, or federal court with jurisdiction over the Party against whom the decision is sought to be enforced.

4. Ivax Anticipated Filing Notice. Not less than [†] and not longer than [†] prior to Ivax, its Affiliates or Sublicensees anticipated filing of the first Product NDA Filing with the applicable Regulatory Authority in the US, Ivax shall give notice in writing to Xenon of such anticipated filing (the "**Anticipated Filing Notice**"). Such Anticipated Filing Notice shall specify:

(a) the Product, and

(b) the anticipated date of the NDA Filing for such Product.

Upon delivery of an Anticipated Filing Notice, Ivax and Xenon shall forthwith enter into good faith discussions and endeavor to finalize and execute a Co-Promotion Agreement as set forth in paragraph 12 below.

5. Ivax Co-Promotion Notice. Not less than [†] following the date of the US NDA Filing set forth in paragraph 4 by Ivax, its Affiliates or Sublicensees, Ivax shall give notice in writing to Xenon (a "**Co-Promotion Notice**"). Such Co-Promotion Notice shall specify:

(a) the Product,

(b) the date of the NDA Filing, and

(c) the anticipated US Product launch date.

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6. Xenon Exercise Notice. Subject to paragraph 7 below, Xenon may, at its election, exercise its Co-Promotion Right in respect of the Product by giving notice in writing to Ivax within [†] after receipt of a Co-Promotion Notice that Xenon will fulfill all of the Ivax Conditions prior to NDA Approval of the Product (an "**Exercise Notice**"). For clarity, the Parties confirm that, for purposes of such Exercise Notice, any Exercise Notice shall be considered an Exercise Notice respecting all Products containing XEN402 or all Products containing XEN403, as applicable. Any such Exercise Notice shall specify the specific percentage Co-Promotion Interest of Xenon applicable to such Products.

   (a) The Exercise Notice shall set forth the Ivax Conditions met by Xenon at the time of the Exercise Notice, and the Ivax Conditions that are not yet met by Xenon at the time of the Exercise Notice. To the extent required by the Ivax Conditions, such Exercise Notice shall also provide relevant Xenon financial statements and other relevant financial information (including a financing plan, if applicable) relating to Xenon's ability to co-Promote the applicable Products.

   (b) To the extent any Ivax Conditions are not yet met by Xenon at the time of the Exercise Notice, Xenon shall set forth in the Exercise Notice a detailed plan for meeting all such Ivax Conditions by the applicable deadlines. Thereafter, Xenon shall submit to Ivax by the applicable deadline for each such Ivax Condition a report setting forth information verifying to Ivax that Xenon has fulfilled such Ivax Condition.

   (c) In the event Xenon fails to meet any reasonable and objective criteria of an Ivax Condition by the applicable deadline, Ivax has the right, at its sole discretion, to determine that such failure is a material breach of Xenon's Co-Promotion Right. In the event of any such determination by Ivax of such material breach, within [†] following date of the applicable deadline, Ivax shall provide written notice (a "**Co-Promotion Breach Notice**") to Xenon specifying the material breach. If Xenon fails to cure such material breach within [†] following the date on which the Co-Promotion Breach Notice is delivered to Xenon, Xenon's Co-Promotion Right shall, without further act by either Party, terminate.

7. Failure to Deliver an Exercise Notice. If Xenon does not give an Exercise Notice within [†] after the latter of (i) the date that Xenon receives a Co-Promotion Notice or (ii) the date of the final determination of the Arbitration referenced in Section 3(b) above, the Xenon Co-Promotion Right shall, without further act by either Party, terminate.

8. Failure to Receive Regulatory Approval. If Ivax does not receive Regulatory Approval for the particular Product described in the NDA Filing referenced in the Co-Promotion Notice, if and as applicable, for the next Product that Ivax seeks Regulatory Approval in the US, Ivax shall give to Xenon a new Anticipated Filing Notice and new Co-Promotion Notice for such Product pursuant to the provisions of paragraph 4 and paragraph 5 above, and Xenon may thereafter exercise its Co-Promotion Right respecting such Products pursuant to paragraph 6, subject to paragraph 7.

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9. Royalty Payments if Not Co-Promoting. If Xenon does not exercise its Co-Promote Right under paragraph 6 above, or upon Xenon exercising its right to cease co-promotion activity for Products as set forth under paragraph 12(f) below, then, notwithstanding any term of the Agreement to the contrary, Ivax shall pay to Xenon Royalty Payments applicable to such Products in the Co-Promotion Territory, in the manner and at the times provided in the Agreement.

10. No Royalty Payments if Co-Promoting. If Xenon exercises its Co-Promotion Right under paragraph 6 above, subject to paragraph 12(f) of this Schedule F and for such time that Xenon continues such co-promotion activity, no Royalty Payments respecting Products shall be payable by Ivax to Xenon within the Co-Promotion Territory.

11. Co-Promotion Fee. If Xenon exercises its Co-Promotion Right under paragraph 6 above, Xenon shall pay to Ivax the sum of an Initial Co-Promotion Fee and a Development Compensation Fee (such sum which shall hereinafter be referred to as the "**Co-Promotion Fee**"):

(a) Initial Co-Promotion Fee payable by Xenon. Xenon shall pay to Ivax a one-time only **"Initial Co-Promotion Fee**". Such Initial Co-Promotion Fee shall be calculated according to the formula set forth below:

Initial Co-Promotion Fee = (Xenon Co-Promotion Interest)

x

(Amount equivalent to the total Milestone Payments paid or payable by Ivax relating to (i) the Commencement of Phase III Trial Milestone Event ($[†]), and (ii) the First NDA Filing with FDA Milestone Event in the Co-Promotion Territory (e.g., $[†]))

By way of example, [†]

(b) Development Compensation Fee payable by Xenon. In addition to the Initial Co-Promotion Fee payable by Xenon set forth in paragraph 11(a), Xenon shall also pay to Ivax, a one-time only "**Development Compensation Fee**". Such

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Development Compensation Fee shall be calculated according to the formula set forth in below:

Development Compensation Fee = (Xenon Co-Promotion Interest)

x

(Ivax US Product Development Costs)

By way of example, [†]

"**Ivax US Product Development Costs**" shall [†].

(c) Payment Dates. The Co-Promotion Fee payable to Ivax shall be paid by Xenon in [†], and on the dates, as follows:

(i) [†]% of the Co-Promotion Fee amount payable shall be paid in the form of a credit to Ivax against the NDA Approval Development Milestone Payment payable by Ivax to Xenon respecting the NDA Approval in the US for the Products to which Xenon has exercised its Co-Promotion Right.

In the event that, as of the date of the NDA Approval in the US for which Xenon has exercised its Co-Promotion Right, both the First NDA Approval Development Milestone Payment and the Second NDA Approval Development Milestone Payment (each of the foregoing Milestone Payments as set forth in Section 7.2 of the Agreement) have already been paid by Ivax to Xenon in consideration for other NDA Approvals in other jurisdictions in the Territory, Xenon shall pay [†]% of the Co-Promotion Fee to Ivax within thirty (30) days following receipt of notice from Ivax that it has obtained the NDA Approval in the US for the Product to which Xenon has exercised its Co-Promotion Right; and

(ii) the remaining [†]% of the Co-Promotion Fee amount payable shall thereafter be paid in the form of a credit to Ivax against one or more of the following future amounts payable by Ivax to Xenon (ie, payments payable to Xenon under this Agreement after the date of the NDA Approval in the US referenced in subparagraph 11(d)(i) above): the Second NDA Approval Milestone Payment, or the Sales Milestone Event, or the Operating Profits.

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In the event that Xenon does not pay the entire Co-Promotion Fee as set forth under subparagraphs 11(c)(i) and 11(c)(ii) above, Xenon shall be obligated to pay the balance of the Co-Promotion Fee to Ivax upon termination of the Agreement, provided, however, that in the event of termination of this Agreement as the result of a breach by Ivax or any of its Affiliates, Ivax shall have the right to set off such balance against the damages attributable to such breach.

(d) NDA Approval Milestone Payment. If Xenon exercises its Co-Promotion Right under paragraph 6 above, subject to paragraph 12(f) of this Schedule F and for such time that Xenon continues such co-Promote activity, the Milestone Payment paid or payable by Ivax relating to the First NDA Approval with FDA Milestone Event in the Co-Promotion Territory (e.g., $[†]) shall be reduced by the Co-Promotion Interest percentage multiplied times [†] percent ([†]%).

By way of example, [†]

(e) Sales Milestone Payment. If Xenon exercises its Co-Promotion Right under paragraph 6 above, subject to paragraph 12(f) of this Schedule F and for such time that Xenon continues such co-Promotion activity, the Sales Milestone Payment set forth in Section 7.3 of the Agreement ($[†]M) shall only be paid in Ivax's first fiscal year for which aggregate annual gross sales (sold by Ivax or any of its Affiliates or Sublicensees, as applicable) of Products outside the Co-Promotion Territory are equal to or greater than [†] Dollars ($[†]), and shall also be reduced to [†] Dollars ($[†]) in such event.

12. Co-Promotion Agreement. Upon Ivax's delivery of an Anticipated Filing Notice pursuant to paragraph 4 above, Xenon and Ivax shall forthwith enter into good faith discussions and devote sufficient resources to finalize and execute within one (1) month after Xenon's delivery of an Exercise Notice to Ivax, a definitive co-promotion agreement with respect to the co-promotion of such Products, which agreement will include among other provisions for planning and overseeing the Promotion of the Product in the Co-Promotion Territory (a "**Co-Promotion Agreement**"). Each Party shall agree to devote appropriate resources and use commercially reasonable efforts to perform the functions necessary to Promote the Product throughout the Co-Promotion Territory

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consistent with the manner in which it would market and promote products of comparable commercial and medical significance in the Co-Promotion Territory, which are developed and controlled by such Party. If the Parties cannot reach agreement on the terms of the Co-Promotion Agreement by the end of such one-month period, then any remaining issues in such negotiations shall be resolved using the accelerated Arbitration process as provided in paragraph 3(c), and, at Xenon's election, the Parties then shall complete such negotiations based on such resolution and enter into the Co-Promotion Agreement as soon as practicable thereafter or, alternatively, Xenon shall have the right not to enter into the Co-Promotion Agreement, which right must be exercised within thirty (30) days of the arbitration decision. The Co-Promotion Agreement shall contain commercially reasonable terms, including terms encapsulating the following principles:

(a) Ivax shall book and invoice each sale of Products within the Co-Promotion Territory. Ivax shall pay to Xenon, not less than once each Calendar Quarter, a share of the Operating Profit from sales of Products within the Co-Promotion Territory for the immediately preceding Calendar Quarter, which percentage share (and payment to Xenon subject to any reconciliation under paragraph 12(c) below), shall be equal to the Co-Promotion Interest.

"**Operating Profit**" shall mean the Net Sales (as that term is defined in Section 1.1 of the Agreement) for Products in the Co-Promotion Territory less the following additional amounts, all determined in accordance with Ivax's standard practices, consistently applied:

(i) [†]; and

(ii) Co-Promotion Expenses (other than capital costs and taxes) incurred by both Parties and their respective Affiliates and Sublicensees.

The amounts referred to in subparagraphs 12(a)(i) and 12(a)(ii) of this Schedule F will be itemized and listed in the Co-Promotion Agreement by mutual agreement of the Parties each acting reasonably, and in accordance with standard practices in the industry.

(b) Xenon shall maintain appropriate conditions in accordance with standard practices in the pharmaceutical industry to co-Promote all subsequent Products approved in the Co-Promotion Territory during the term of the Co-Promotion Agreement.

(c) Each Party shall keep (and shall cause each of its Affiliates and Sublicensees to keep) and make available to the other Party pursuant to this paragraph 12(a) complete and accurate records of the underlying data relating to the amounts referred to in paragraphs 12(a)(i) and 12(a)(ii) of this Schedule F for a period of no more than [†] years. Each Party (the "**Auditing Party**") shall have the right

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from time to time (but not more often than once in each Year) at its own expense to have the independent, certified public accountant of the other Party (the "**Audited Party**"), during the Audited Party's annual audit period, review any such records of the Audited Party upon reasonable notice and during regular business hours and under obligations of confidence, for the sole purpose of verifying the basis and accuracy of the Audited Party's records relating to the amounts referred to in subparagraphs 12(a)(i) and 12(a)(ii) of this Schedule F. If the Auditing Party reasonably believes, after reviewing information received from the Audited Party's independent, certified public accountant, that an additional audit is appropriate to address an apparent discrepancy with respect to the Audited Party's calculations, then the Auditing Party shall have the right to audit using a major independent, certified public accounting firm reasonably acceptable to the Audited Party in accordance with Section 8.9 of the Agreement. If the review of such records reveals that the Audited Party has failed to accurately report amounts referred to in subparagraphs 12(a)(i) and 12(a)(ii) of this Schedule F, then the Parties shall promptly make the necessary payments and adjustments between themselves to rectify the failure, together with interest on any amounts owing by the Audited Party to the Auditing Party from the date of the failure that gave rise to the owing amount at a rate per annum equal to the lesser of (i) one month London Inter-Bank Offered Rate (LIBOR) fixed by the British Bankers' Association (BBA), plus [†] percent ([†]%), or (ii) the highest rate permitted by applicable law, compounded annually, and calculated on the number of days such payments are paid after the date such amounts became owing. If any amounts due under this paragraph 12(a) as a result of an audit are greater than [†] percent ([†]%) of the Operating Profits for a Year, the Audited Party shall pay the reasonable costs of such audit. Draft and final audit results and findings shall be shared by the Audited Party and the Auditing Party. If the Audited Party in good faith disputes any conclusion of the accounting firm under this paragraph 12(a), including that the Audited Party owes additional amounts, the Audited Party shall so inform the Auditing Party by written notice within thirty (30) days after receipt of a copy of the audit in question, specifying in detail such dispute. The Parties shall promptly thereafter meet and negotiate in good faith a resolution to such dispute. If the Parties are unable to resolve such dispute within sixty (60) days after notice by the Audited Party, then the matter shall be resolved pursuant to the terms set forth in Article 13 of the Agreement, and interest shall be payable on any disputed amounts determined to be due in the same manner as provided for in this paragraph 12(a).

(d) Each Party shall contribute its proportional percentage share of the collective Co-Promotion Expenses, in accordance with the Co-Promotion Interest. The Co-Promotion Expenses will be itemized and listed in the Co-Promotion Agreement by mutual agreement of the Parties, each acting reasonably in accordance with reasonable industry standards. Each Party will bear its proportional share of all such Co-Promotion Expenses, in accordance with the Co-Promotion Interest percentage. As referenced in paragraph 12(a) above, in the

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event that the amounts of such costs incurred by each Party are not in fact equal to their respective share having regard to the Co-Promotion Interest, a reconciliation shall take place each Calendar Quarter respecting these cost amounts, to ensure that each Party bears (only) its proportional share of all such costs, in accordance with the Co-Promotion Interest percentage, and (if applicable) each Calendar Quarter payment by Ivax to Xenon of its share of the Operating Profits (as set forth under paragraph 12(a) above) shall be adjusted (up or down) accordingly.

(e) Xenon will contribute its percentage share of the total full time equivalent number of sales representatives dedicated to the Detailing and sale of Products within the Co-Promotion Territory, which percentage share shall be equal to the Co-Promotion Interest. Across the Co-Promotion Territory, having regard to the Co-Promotion Interest, Ivax shall have the sole right to assign accounts to both Ivax and Xenon sales representatives, and such Xenon sales representatives shall be responsible for the same proportion of high and low volume accounts and same proportion of primary and secondary Details as are the Ivax sales representatives, and shall pro rata perform as well as the Ivax sales representatives. Each Party will be subject to agreed upon penalties for any non-compliance or shortfalls (eg: minimum call shortfalls). Ivax will have the right, upon reasonable notice to Xenon, to have Ivax management periodically accompany Xenon's sales representatives in the course of Detailing the Products. If requested by Xenon[†]. For the avoidance of doubt, and notwithstanding anything to the contrary under Article 15 of the Agreement, under no circumstances shall either Party be obliged to indemnify or hold harmless the other Party for negligent or intentional acts or omissions relating to Detailing conducted by the other Party's sales representatives. The annual incentive compensation (excluding contests and special incentives) of the sales force of Xenon for Detailing the Products as a percentage of base salary shall be [†]; provided, that such incentive compensation is consistent with the financial targets applicable to both Xenon and Ivax as set forth in the Promotion Plan in proportion to the Co-Promotion Interest.

(f) Xenon shall be permitted, on a Product-by-Product basis, at any time, to cease co-promotion activity within the Co-Promotion Territory, at its sole discretion, after providing Ivax with [†] prior written notice of its intent to cease such co-promotion activity in the Co-Promotion Territory. At the time of cessation, Xenon shall no longer receive a share of the Operating Profit within the Co-Promotion Territory and Ivax shall, as of and following the date of any such cessation, pay to Xenon the Royalty Payments respecting Products, in the manner and at the times provided in the Agreement.

(g) Ivax and Xenon agree that Xenon shall share with Ivax, proportionately in accordance with its Co-Promotion Interest, up to the next $[†] of any expenditures made by Ivax after the date of the first NDA Approval in the US, related to Development and Phase IV Clinical Trials of the Product to which Xenon has exercised its Co-Promotion Right in the Co-Promotion Territory. Xenon's

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proportional share of any such additional expenditures, on a Calendar Quarter by Calendar Quarter basis, may be credited to Ivax against Xenon's share of Operating Profits payable by Ivax to Xenon as set forth under paragraph 12(a) above. Ivax shall be solely responsible for any further expenditures.

(h) Ivax shall form a "**Promotional Committee**" that shall be responsible for planning and overseeing the Promotion of the Product within the Co-Promotion Territory. The Promotional Committee shall create an annual Promotional Plan for the Product in the Co-Promotion Territory, which shall contain elements as set forth in Annex A attached hereto, with a budget for Co-Promotion Expenses, and an allocation of responsibility between Ivax and Xenon of all Promotion activities.

(i) Xenon shall be entitled to have at least one Xenon representative on any Promotional Committee formed by Ivax respecting the Co-Promotion Territory, and on any other related committees formed by Ivax that are specific to the Promotion of the Product in Co-Promotion Territory. The chair of the committee(s) referred to in this paragraph 12(i) shall be a representative from Ivax. If the Parties' representatives on any committee(s) referred to in this paragraph 12(i) are unable to agree on any matter, then the chair will have the casting and deciding vote. In addition to the foregoing, Xenon shall also be entitled to attend and participate in any other meetings (and receive copies of materials and presentations relevant to such meetings) in which matters are discussed that may be material to the Promotion or further Commercialization of the Product in the Co-Promotion Territory, including but not limited to meetings with key opinion leaders or external advisory boards, but not including any routine internal reporting meetings between Ivax personnel and Ivax's executive management.

(j) Each of Xenon and Ivax shall report to the other in writing, not less than once each Calendar Quarter, with respect to their respective Promotion efforts and, in the case of Ivax, providing sales figures, in such detail as Xenon shall reasonably require. All relevant sales representatives performing Detailing calls on behalf of Ivax and Xenon with respect to the Products will maintain written (including electronic) records of all such Detailing calls made to Target Prescribers. The quarterly report of each Party respecting Promotion efforts will be accompanied by summary Detail reports for the period. Each Party on an annual basis may, upon reasonable prior notice to the other Party, audit the other Party's records to verify that the information disclosed in the quarterly reports is accurate and consistent with the other Party's obligations herein. If the information disclosed in the quarterly reports is found not to be consistent with the other Party's obligations herein, the non-complying Party shall pay the reasonable costs of such audit, and shall pay penalties for any such non-compliance or shortfalls as agreed to pursuant to paragraph 12(c).

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(k) Ivax shall Manufacture, or have Manufactured, each Product in accordance with all Applicable Law and the specifications for such Product as approved by the relevant Regulatory Authority within the Co-Promotion Territory, and shall be responsible for all quality assurance issues arising therefrom. Ivax shall be responsible for all Manufacture, labeling, packaging and distribution of Products in the Co-Promotion Territory, and shall comply with Applicable Law regarding the same.

(l) Each Party, including its sales representatives, shall Promote the Product in the Co-Promotion Territory in strict adherence with regulatory and professional requirements and all Applicable Law, including the U.S. Federal *Food, Drug, and Cosmetic Act* of 1938, as amended from time to time, and all rules, regulations and guidance promulgated thereunder; the American Medical Association Gifts to Physicians from Industry Guidelines, as revised from time to time; the Prescription Drug Marketing Act of 1987, as amended, and the regulations promulgated thereunder; and the PhRMA Code on Interactions with Healthcare Professionals promulgated and adopted by the Pharmaceutical Research and Manufacturers of America, which became effective July 1, 2002, as amended from time to time. To the extent a Party has knowledge or becomes aware that the Applicable Law related to Promoting the Product in the Co-Promotion Territory has changed, it will promptly notify the other in writing, and both Parties will as soon as practicable adhere to the updated obligations to Promote the Product under Applicable Law. Pursuant to this paragraph 12(l):

(i) Each Party shall ensure that it and its respective sales representatives' statements and claims regarding the Product, including those as to safety and efficacy, are consistent with the applicable product labeling and Marketing Materials. As used herein, "**Marketing Materials**" shall mean all written, printed, electronic or graphic materials developed by Ivax or its Affiliates and/or on behalf of Ivax and/or its Affiliates by any Third Party, in connection with the Promotion of the Product pursuant to the Promotional Plan in the Co-Promotional Territory, including scientific education materials, professional education materials, any and all patient lists, physician references, Detailing reports, Detailing pieces (such as visual aids and file cards), premium articles, reprints, market surveys, training materials and other reports and related data or programs.

(ii) Each Party and its sales representatives may only utilize the Marketing Materials that have been approved by the Promotional Committee to Promote the Product in the Co-Promotional Territory. All Marketing Materials shall be owned exclusively by Ivax. Neither Party nor its sales representatives may make any changes in the Marketing Materials, and may not add, delete or modify claims of safety or efficacy stated in the Marketing Materials, without the prior written approval of the Promotional Committee.

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(m) In accordance with Ivax's standard practices for its own marketing, Detailing and sales teams, Ivax/or and its Affliates will provide training to and consult with Xenon with respect to the Detailing of the Products in the Co-Promotion Territory, including without limitation, training sessions for purposes of remedial training, education on current developments, new uses or indications, and new Ivax Marketing Materials or programs. If such training and consultation is in addition to the Ivax or Ivax Affiliate's standard program, Xenon shall bear all Xenon out-of-pocket costs and all Ivax costs (at Ivax's cost rates, including all out-of-pocket costs of Ivax respecting Ivax employees employed in such training and consultation) respecting such training. If such Xenon participation is in training undertaken by Ivax or an Ivax Afflicate as part of their respective standard marketing, Detailing, or other sales training program(s), Xenon shall be responsible only for its own out-of-pocket costs.

(n) Ivax shall continue to be solely responsible for the formulation, indications, and packaging for the Products. Ivax may change any packaging at its own discretion with thirty (30) days prior written notice to Xenon. Unless required by Applicable Law, Ivax shall be responsible for the cost of such changes and the cost to change any and all Marketing and promotional materials. If required by Applicable Law, Xenon shall share such costs according to its Co-Promotion Interest. Should Xenon elect to do so, and subject to Applicable Law, product packaging of Products in the Co-Promotion Territory shall include, at Xenon's sole discretion, the name of Xenon, Xenon trademarks or tradenames, or other Xenon identifying material (collectively, the "**Xenon Identifying Material**"). Such Xenon Identifying Material shall be in a form and format that is reasonably acceptable to each of Xenon and Ivax, having regard to standard industry practices and Ivax's previous practices with other companies in this regard.

(o) As provided under Article 10 of the Agreement (unless the Agreement is terminated earlier), Ivax shall have responsibility for prosecuting and maintaining all patent applications and patents relating to the Products. Ivax shall also have responsibility for all trademark applications and trademarks relating to any trademark, service marks, copyrights and other Intellectual Property rights (if any) relating to the Products within the Co-Promotion Territory. Ivax shall use Diligent Efforts to maintain in the Co-Promotion Territory its trademarks relating to the Products.

(p) Ivax and Xenon shall each notify each other within two (2) Business Days of receiving any Product complaints. As between Xenon and Ivax, Ivax shall be responsible for addressing all manufacturing defects in the Products. In addition, Ivax shall be responsible for addressing all customer complaints regarding any alleged manufacturing defects of any Product. Ivax shall be responsible for handling and covering the cost of all recalls and returns of Products and replacement of defective Products. Xenon, its Affiliates, Sublicensees, officers, directors, employees or agents shall in no way be responsible for any defects or damages with respect to Products, or their shipment or delivery.

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(q) Ivax shall use Diligent Efforts to supply sufficient quantities of the Product to meet the requirements of purchasers in the Territory (including in the Co-Promotion Territory).

(r) [†].

(s) Ivax shall produce all samples for use in the Promotion of the Product. Ivax shall establish the guidelines for sampling, and shall consult with Xenon with respect thereto. Ivax shall supply such quantities of samples to Xenon as Ivax and Xenon mutually agree is appropriate in connection with Promotion efforts.

(t) If any Product is recalled by Ivax or Regulatory Authorities in the Co-Promotion Territory, Ivax shall be responsible for all expenses relating to such recall and for all activities to be performed relating to such recall, and Xenon shall repay to Ivax its proportional percentage share of the expenses relating to such recall in accordance with the Co-promotion Interest, except to the extent that such recall is a direct result of activities under the sole control of Ivax. Prior to any such recall, Ivax shall advise Xenon of the situation. Ivax shall provide Xenon with a prepared statement for use in response to inquiries regarding the Product recall which Xenon shall provide to Xenon sales representatives Promoting the Product.

(u) Each Party shall promptly, and in any event within any time periods required by Applicable Law, give notice in writing to the other of any adverse drug experience associated with the Product. Prior to the first Regulatory Approval for Commercialization of the first Product in the Co-Promotion Territory, and pursuant to the delivery of the Co-Promotion Notice, the Parties shall agree and implement a procedure for the mutual exchange of adverse event reports and safety information associated with the Product. Details of the operating procedure respecting such adverse event reports and safety information exchange shall be the subject of a mutually-agreed-to pharmacovigilance agreement between the Parties which shall at that time be made an addendum to the Co-Promotion Agreement.

13. No Conflict

The provisions of this Schedule F are in addition to, and not in substitution for, the other provisions of the Agreement. If there is any conflict between the provisions of this Schedule and any other provisions of the Agreement, the provisions of the Agreement shall prevail.

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SCHEDULE G - PRESS RELEASE

Teva and Xenon Announce Teva's World Wide License of Xenon's Pain Drug XEN402

XEN402 is a Strategic Fit for Teva's Commercial, R&D and Technology focus in CNS and Pain

Jerusalem, and Burnaby, British Columbia DATE — Teva Pharmaceutical Industries Ltd (NYSE: TEVA) and Xenon Pharmaceuticals Inc. (Xenon) announced today that they have entered into a collaborative development and exclusive worldwide license for XEN402. XEN402 is currently in clinical development for a variety of painful disorders. This product specifically targets sodium channels which are abundantly found in sensory nerve endings that can increase in chronic painful conditions. Under the Agreement, Teva will pay Xenon an upfront fee of $41 million. In addition Teva shall pay development, regulatory, and sales-based milestones totaling up to $335M. Xenon is entitled to royalties payable on sales and an option to participate in commercialization in the U.S.

"Teva is building a focused pipeline of novel medicines in select areas of medical need," stated Dr. Jeremy Levin, President and CEO of Teva Pharmaceutical Industries Ltd. "XEN402 fits this strategy. It holds the potential to address the significant unmet medical need for the many patients who suffer from chronic pain. In addition, XEN402 has the potential for broader therapeutic use across other pain conditions."

"We are delighted to be collaborating with Teva" said Simon Pimstone, M.D., Ph.D., President and CEO of Xenon. "Teva is among the world's leading pharmaceutical companies and is building a significant global presence in innovative drug development and commercialization. This partnership with Teva is Xenon's seventh major pharmaceutical alliance, once again highlighting the value of Xenon's unique genetics approach and translational R&D capabilities."

About XEN402

XEN402 treats pain locally at its source through blocking of Nav1.7 and Nav1.8 sodium channels. XEN402 has been studied in human subjects as both oral and topical forms. In a published study, oral XEN402 was shown to be effective at relieving the pain associated with the rare neuropathic pain condition, erythromelalgia (Pain 2012 Jan;153(1):80-5). Topical XEN402 was studied in a phase 2 trial to evaluate for effectiveness in alleviating the pain of post herpetic neuralgia. In this study the proportion of patients reporting clinically meaningful reductions in pain was significantly greater for topical XEN402 than for placebo (p=0.049 for >30% response and p=0.0078 for >50% response).

About Teva

Teva Pharmaceutical Industries Ltd. (NYSE: TEVA) is a leading global pharmaceutical company, committed to increasing access to high-quality healthcare by developing, producing and marketing affordable generic drugs as well as specialty pharmaceuticals and active

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pharmaceutical ingredients. Headquartered in Israel, Teva is a world leading generic drug maker, with a global product portfolio of more than 1,300 molecules and a direct presence in about 60 countries. Teva's branded businesses focus on CNS, oncology, pain, respiratory and women's health therapeutic areas. Teva currently employs approximately 46,000 people around the world and reached $18.3 billion in net revenues in 2011.

About Xenon Pharmaceuticals Inc.

Xenon is a privately owned, clinical genetics-based drug discovery and development company engaged in developing novel therapies based on the genetic causes of select metabolic, neurological and cardiovascular diseases. For more information, visit the Company's website at http://www.xenon-pharma.com.

Teva Safe Harbor

The following discussion and analysis contains forward-looking statements, which express the current beliefs and expectations of management. Such statements involve a number of known and unknown risks and uncertainties that could cause our future results, performance or achievements to differ significantly from the results, performance or achievements expressed or implied by such forward-looking statements. Important factors that could cause or contribute to such differences include risks relating to: our ability to develop and commercialize additional pharmaceutical products, competition from the introduction of competing generic equivalents and due to increased governmental pricing pressures, the effects of competition on sales of our innovative medicines, especially Copaxone® (including competition from innovative orally-administered alternatives as well as from potential generic equivalents), potential liability for sales of generic medicines prior to a final resolution of outstanding patent litigation, including that relating to our generic version of Protonix®, the extent to which we may obtain U.S. market exclusivity for certain of our new generic medicines, the extent to which any manufacturing or quality control problems damage our reputation for high quality production and require costly remediation, our ability to identify, consummate and successfully integrate acquisitions (including the acquisition of Cephalon), our ability to achieve expected results through our innovative R&D efforts, dependence on the effectiveness of our patents and other protections for innovative medicines, intense competition in our specialty pharmaceutical businesses, uncertainties surrounding the legislative and regulatory pathway for the registration and approval of biotechnology-based medicines, our potential exposure to product liability claims to the extent not covered by insurance, any failures to comply with the complex Medicare and Medicaid reporting and payment obligations, our exposure to currency fluctuations and restrictions as well as credit risks, the effects of reforms in healthcare regulation and pharmaceutical pricing and reimbursement, adverse effects of political instability and adverse economic conditions, major hostilities or acts of terrorism on our significant worldwide operations, increased government scrutiny in both the U.S. and Europe of our agreements with brand companies, interruptions in our supply chain or problems with our information technology systems that adversely affect our complex manufacturing processes, the impact of continuing consolidation of our distributors and customers, the difficulty of complying with U.S. Food and Drug Administration, European Medicines Agency and other regulatory authority requirements, potentially significant

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impairments of intangible assets and goodwill, potential increases in tax liabilities resulting from challenges to our intercompany arrangements, the termination or expiration of governmental programs or tax benefits, any failure to retain key personnel or to attract additional executive and managerial talent, environmental risks, and other factors that are discussed in our Annual Report on Form 20-F for the year ended December 31, 2011 and in our other filings with the U.S. Securities and Exchange Commission ("SEC"). Forward-looking statements speak only as of the date on which they are made, and we undertake no obligation to update any forward-looking statements or other information contained in this report, whether as a result of new information, future events or otherwise.

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SCHEDULE H – THIRD PARTY AGREEMENTS

1. Master Services Agreement dated June 3, 2010 between Xenon Pharmaceuticals Inc. and [†].

2. Master Services Agreement dated July 25, 2007 between [†] and Xenon Pharmaceuticals Inc.

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

GUARANTEE OF PERFORMANCE

THIS GUARANTEE is made effective as of December 7, 2012.

BETWEEN:

TEVA PHARMACEUTICAL INDUSTRIES LTD., an Israeli limited liability corporation having its principal place of business at 5 Basel Street, Petach, Tikva, 49131, Israel

("**Teva**")

AND:

XENON PHARMACEUTICALS INC., a Canadian corporation having its principal place of business at 3650 Gilmore Way, Burnaby, British Columbia, V5G 4W8

("Xenon")

WHEREAS:

A. Xenon has entered into a Collaborative Development and License Agreement (the "**Agreement**") with Ivax International GMBH ("**Ivax**"), a wholly-owned subsidiary of Teva, upon the condition that Teva guarantee the performance of the financial obligations of Ivax under the Agreement;

B. Teva is prepared to guarantee the performance of the financial obligations of Ivax under the Agreement upon the terms set out herein;

IN CONSIDERATION of Xenon entering into the Agreement with Ivax, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, Teva hereby unconditionally guarantees to Xenon the due and punctual performance by Ivax of all obligations of Ivax (financial or otherwise) under the Agreement. The following terms apply to this Guarantee:

(a) Teva hereby unconditionally, absolutely and irrevocably guarantees and covenants to Xenon the full performance, observance and satisfaction of, any and all obligations as and when due by Ivax to Xenon under the Agreement (the "**Guaranteed Obligations**"),

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(b) The liability of Teva pursuant to this Guarantee shall not be discharged, limited or released by any extensions of time for any Guaranteed Obligations granted by Xenon to Ivax.

(c) If any default shall be made in the performance, observance and satisfaction of any of the Guaranteed Obligations, Teva covenants and agrees with Xenon that following receipt from Xenon of notice of such default , it shall perform, observe and satisfy for the benefit of Xenon forthwith any and all of the Guaranteed Obligations in respect of which such default will have occurred, on the same terms and conditions and subject to the same rights, benefits and limitations as are applicable under the Agreement respecting the carrying out of such Guaranteed Obligations by Ivax under the Agreement.

(d) Until there has been full performance, observance, satisfaction and payment of all of the Guaranteed Obligations, the rights of Xenon and the obligations of Teva under this Guarantee shall remain in full force and effect without regard to, and shall not be released, discharged or in any way affected or impaired, terminated or prejudiced by, the dissolution, winding-up or other cessation of existence of Ivax, the amalgamation of Ivax with another corporation, the appointment of a custodian, liquidator, receiver or trustee in respect of the assets or undertaking, in whole or in part, of Ivax, any arrangement, bankruptcy, composition, insolvency, liquidation, readjustment, receivership, reorganization or other similar proceeding or occurrence relating to Ivax, or any assignment by Ivax for the benefit of creditors.

(e) In any action commenced by Xenon to enforce this Guarantee against Teva, Teva shall be entitled, in relation to the Guaranteed Obligations, to any and all of the rights, defenses and equities to which Ivax would be entitled in respect of such Guaranteed Obligations.

(f) The foregoing guarantee shall be fully enforceable against Teva without Xenon first bringing legal process against or exhausting any remedy against Ivax.

(g) Xenon may assign, grant, pledge or transfer its interest in this Guarantee or any of the guaranteed liabilities or any power, remedy or right of Xenon hereunder on the same terms upon which Xenon may assign its interest in the Agreement.

(h) No waiver on the part of Xenon to exercise, and no delay in exercising, any right hereunder will operate as a waiver of this Guarantee, nor will any single or partial exercise of any right hereunder preclude the other or further exercise thereof of the exercise of any other right. The remedies provided hereunder are not exclusive of any remedies provided at law.

(i) This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada in force therein without reference to any rules of conflict of laws.

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IN WITNESS WHEREOF, the parties hereto have executed this Guarantee on the dates stated below:

XENON PHARMACEUTICALS INC.

Per: /s/ Simon Pimstone
Name: Simon Pimstone
Title: President and Chief Executive Officer

Date: December 7, 2012

TEVA PHARMACEUTICAL INDUSTRIES LTD.

Per: /s/ Gyal Desheh
Name: Gyal Desheh
Title: EVP and CFO

Date: December 7, 2012

TEVA PHARMACEUTICAL INDUSTRIES LTD.

Per: /s/ Judith Vardi
Name: Judith Vardi
Title: President & CEO of EMIA and APAC

Date: December 7, 2012

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March 27, 2013

Xenon Pharmaceuticals Inc.
200 - 3650 Gilmore Way
Burnaby, BC
Canada
Facsimile: 604-484-3450
("**Xenon**")

Re: Letter of agreement (the "Letter Agreement") regarding the assignment of manufacture and supply agreements as described in the Collaborative Development and License Agreement and regarding certain third party services under such agreements.

Dear President and Chief Executive Officer,

We refer to the Collaborative Development and License Agreement dated December 7th, 2012 by and between Ivax International GmbH ("**Ivax**") and Xenon, pursuant to which Xenon and Ivax collaborate on the clinical development of certain compounds, and Ivax and its Affiliates shall further develop, manufacture and sell products containing such compound(s) (the "**Agreement**").

Pursuant to section 5.1 of the Agreement, Ivax has the sole right and responsibility for, and control over, all Manufacturing of XEN402, XEN403 and Products, at its sole cost. In order to comply with such right and responsibility, the Parties agreed that Xenon shall devote all reasonable commercial efforts to assign the Third Party agreements identified in Schedule H ("**Third Party Agreements**") to Ivax, and effecting the assignment of the Third Party Agreements within thirty (30) days after the Effective Date of the Agreement.

Without derogating from section 5.1, the Parties hereby agree:

1. To amend and expand Schedule H to include the Master Services Agreement dated [†] between Xenon and [†], as amended pursuant to the Amendment #1 dated for reference [†] and the letter agreement dated [†] (hereinafter collectively referred to as the "[†] **MSA**"), and further agree that the term "Third Party Agreements" is and shall hereafter be deemed to include the [†] MSA.
2. That Xenon is to withhold from contacting the relevant Third Parties to obtain their consent (as applicable) to assign such Third Party Agreements and to otherwise withhold from effecting such assignments as described in Section 5.1 of the Agreement, in order to allow the smooth transaction of the Manufacture by said Third Parties, until such time(s) that:

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a. with respect to the [†] MSA (as defined below), that the (4) Work Orders described in paragraph 4(a) below have been executed; and

b. with respect to the [†] MSA, that the (1) Task Order described in paragraph 4(b) below has been executed; and

c. with respect to the Master Services Agreement dated [†] between Xenon and [†], as amended pursuant to the Amending Agreement made and dated as of [†] (hereinafter collectively referred to as the "[†] **MSA**"), within [†] days following the date of this Letter Agreement; and/or

d. such other date or time that may hereafter be agreed upon by and between duly authorized signatories of the Parties in writing.

3. As of the dates referenced in paragraph 2 above, Xenon shall resume reasonable commercial efforts to obtaining the consent(s) to assign the relevant Third Party Agreement(s) to Ivax and effecting such assignment(s).

4. Until the assignment of each Third Party Agreement takes place, the Parties hereby agree that Xenon shall proceed doing business under the Third Party Agreement(s) on behalf of and in cooperation with Ivax, in order to facilitate the conduct of certain services by said Third Parties as described below, and Ivax shall reimburse Xenon, through its affiliate Teva Pharmaceutical Industries Ltd ("**Teva**"), within [†] after the last day of the month of which the invoice was received by Teva, for payments made by Xenon to such Third Parties relating to such services, further details of which are set forth below:

   a. Pursuant to the Master Services Agreement made as [†] between Xenon Pharmaceuticals Inc. and [†], as amended February 20, 2013 (hereinafter collectively referred to as the "[†] **MSA**"), [†] shall proceed providing the services, and on behalf of Ivax Xenon shall make payments to [†], each as described in:

      i. **Work Order #**[†];

      ii. **Work Order #**[†];

      iii. **Work Order #**[†]; and

      iv. **Work Order #**[†].

   b. Pursuant to the [†] MSA, [†] shall proceed providing the services, and on behalf of Ivax Xenon shall make payments to[†], each as described in:

      i. **Task Order #**[†], relating to [†] (such services which the Parties currently anticipate will commence in [†]).

5. As of the date of assignment of the [†] MSA, Xenon shall also assign to Ivax, the (4) Work Orders referenced in paragraph 4(a) above.

6. As of the date of assignment of the [†] MSA, Xenon shall also assign to Ivax, the Task Order referenced in paragraph 4(b) above.

Teva Pharmaceutical Industries Ltd.

Tel: +972.3.9267267 Fax. +972.3.9267425. 5 Basel Street, Petach Tikva, Israel. 49131 www.tevapharm.com

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

7. The Agreement shall be construed in conjunction with this Letter Agreement as an integral part thereof and shall remain of full force and effect, save as specifically amended herein. The remaining terms and conditions of the Agreement shall continue in full force and effect. However, if there are any inconsistencies between the terms of this Letter Agreement and the provisions of Agreement, then this Letter Agreement shall prevail.
8. All capitalized terms used in this Letter Agreement, which are not otherwise defined herein, shall have the same meaning as ascribed to such terms in the Agreement.

We would like to take this opportunity to thank you for your cooperation on this project.

Please confirm your agreement to the above by signing both copies of this Letter Agreement, returning one copy to me at the address above and retaining a copy for your records.

Yours sincerely,

Ivax International GmbH,

By: /s/ Naam Baram
Name: Naama Baram
Title: General Manager

By: /s/ David Koch
Name: David Koch
Title: Managing Officer

Countersigned for and on behalf of Xenon Pharmaceuticals Inc.,

By: /s/ Simon Pimstone
Name: Simon Pimstone
Title: President and CEO

Cc: Xenon Pharmaceuticals Inc., 200 - 3650 Gilmore Way, Burnaby, BC, Canada
Attention: General Counsel and Corporate Secretary. Facsimile: 604-484-3450

Teva Pharmaceutical Industries Ltd.

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IVAX International GmbH

Alpenstrasse 2
8640 Rapperswil
Switzerland

Tel: +41 (0)55 220 1040
Fax: +41 (0)55 220 1049

April 4, 2013

Xenon Pharmaceuticals Inc.
200 - 3650 Gilmore Way
Burnaby, BC
Canada
Facsimile: 604-484-3450
("**Xenon**")

Re: **Letter of agreement (the "Letter Agreement #2") regarding certain third party services to be conducted in furtherance of clinical development activities under the Collaborative Development and License Agreement.**

Dear President and Chief Executive Officer,

We refer to the Collaborative Development and License Agreement dated December 7th, 2012, as amended by a Letter of Agreement dated March 27, 2013, by and between Ivax International GmbH ("**Ivax**") and Xenon, pursuant to which Xenon and Ivax collaborate on the clinical development of certain compounds, and Ivax and its Affiliates shall further develop, manufacture and sell products containing such compound(s) (the "**Agreement**").

The Parties hereby agree:

1. Provided that Xenon has first received a written request to engage such Third Party consultants and/or service providers from one or more persons designated in writing from time to time by a duly authorized signatory of Teva as having the authority to provide such request (such designated persons which shall include its Project Leader under the Agreement (currently Dr. Shoshi Tessler) and/or Dr. Michaela Vardi), such written request which may be in the form of an email or otherwise, in cooperation with Ivax, Xenon may and shall proceed doing business under its consulting agreements and/or services agreements with such Third Parties in order to facilitate the conduct of certain services by these consultants/service providers which are and/or shall be contemplated under the Collaborative Development Plan of the Agreement, and Ivax shall reimburse Xenon, through its affiliate Teva Pharmaceutical Industries Ltd ("**Teva**"), within 60 days after the last day of the month of which the invoice was received by Teva, for payments made by Xenon to such consultants/service providers relating to such services.
2. The Agreement shall be construed in conjunction with this Letter Agreement #2 as an integral part thereof and shall remain of full force and effect, save as specifically amended herein. The remaining terms and conditions of the Agreement shall continue in full force and effect. However, if there are any inconsistencies between the terms of this Letter Agreement #2 and the provisions of Agreement, then this Letter Agreement #2 shall prevail.

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IVAX International GmbH

Alpenstrasse 2
8640 Rapperswil
Switzerland

Tel: +41 (0)55 220 1040
Fax: +41 (0)55 220 1049

3. All capitalized terms used in this Letter Agreement #2, which are not otherwise defined herein, shall have the same meaning as ascribed to such terms in the Agreement.

We would like to take this opportunity to thank you for your cooperation on this project.

Please confirm your agreement to the above by signing both copies of this Letter Agreement #2, returning one copy to me at the address above and retaining a copy for your records.

Yours sincerely,

Ivax International GmbH,

By: /s/ Naama Baram
Name: Naama Baram
Title: General Manager

By: /s/ David Koch
Name: David Koch
Title: Managing Officer

Countersigned for and on behalf of Xenon Pharmaceuticals Inc.,

By: /s/ Karen G. Corraini
Name: Karen G. Corraini
Title: General Counsel and Corporate Secretary

Cc: Xenon Pharmaceuticals Inc., 200 - 3650 Gilmore Way, Burnaby, BC, Canada
Attention: General Counsel and Corporate Secretary. Facsimile: 604-484-3450

Teva Pharmaceutical Industries Ltd.

Tel: +972.3.9267267 Fax. +972.3.9267425. 5 Basel Street, Petach Tikva, Israel. 49131

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Exhibit 10.5

LICENSE AGREEMENT

BETWEEN:

THE UNIVERSITY OF BRITISH COLUMBIA, a corporation continued under the University Act of British Columbia and having its administrative offices at 2075 Wesbrook Mall, in the City of Vancouver, in the Province of British Columbia, V6T 1W5

(the ***"University")***

AND:

XENON GENETICS INC., a corporation continued under the laws of Canada, and having its administrative offices at Suite 100—2386 East Mall, Vancouver, British Columbia, V6T 1Z3

(the ***"Licensee***")

WHEREAS:

A. The University has been engaged in research during the course of which it has invented, developed and/or acquired certain technology identified in UBC Invention Disclosure File #UBC 94-061, entitled "*Lipolipase Mutation 291, Implication for Coronary Artery Disease*", and File #UBC 91-003, entitled "*Mutation in Human Lipoprotein Lipase Gene which causes Type 1 Hyperlipoproteinemia*";

B. [†] has invented, developed and/or acquired certain technology which may have common subject matter with certain technology invented, developed and/or acquired by the University, and identified in UBC Invention Disclosure File # UBC 99-082, entitled "*Recombinant Viruses Preparation and use thereof in Gene Therapy*;

C. The University has been jointly engaged in research with the Academic Hospital at the University of Amsterdam ("***AMC"***) during the course of which they have jointly invented, developed and/or acquired certain technology identified in UBC Invention Disclosure File # UBC 00039, entitled "*Mutation 447*";

D. The research done at the University with respect to the above referenced technologies was undertaken by Dr. Michael Hayden who is an employee of the University engaged in a number of research projects and a founder and chief scientific officer of the Licensee;

E. [†]

F. The University is desirous of entering into this agreement (the "***Agreement'***) with the objective of furthering society's use of its advanced technology, and to generate further research in a manner consistent with its status as a non-profit, tax exempt educational institution; and

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G. Subject to the terms and conditions hereinafter set out, the Licensee is desirous of the University granting a license to the Licensee to use or cause to be used the University's interest in such technology to manufacture, distribute, market, sell and/or license or sublicense products and services derived or developed from such technology.

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the premises and of the mutual covenants herein set forth, the parties hereto have covenanted and agreed as follows:

1.0 DEFINITIONS:

1.1 In this Agreement, unless a contrary intention appears, the following words and phrases shall mean:

(a) ***"Accounting":*** an accounting statement setting out in detail how the amount of Revenue was determined;

(b) ***"Affiliated Company*** or ***"Affiliated Companies***": two or more corporations where the relationship between them is one in which one of them is a subsidiary of the other, or both are subsidiaries of the same corporation, or fifty percent (50%) or more of the voting shares of each of them is owned or controlled by the same person, corporation or other legal entity;

(c) "***Collaborative Research Agreement***": the Collaborative Research Agreement dated August 1, 2000 between the University and the Licensee, which contemplates the performance of a research project entitled "*LPL Gene Therapy for LPL Deficiency*",

(d) ***"Confidential Information***": any part of the Information which is designated by either party (the ***"Disclosing Party***") as confidential, whether orally or in writing but excluding any part of the Information:

(i) possessed by the receiving party prior to receipt from the Disclosing Party, other than through prior disclosure by the Disclosing Party, as evidenced by the receiving party's business records;

(ii) published or available to the general public otherwise than through a breach of this Agreement;

(iii) obtained by the receiving party from a third party with a valid right to disclose it, provided that said third party is not under a confidentiality obligation to the Disclosing Party; or

(iv) independently developed by employees, agents or consultants of the receiving party who had no knowledge of or access to the Disclosing Party's Information as evidenced by the receiving party's business records;

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(e) ***"Date of Commencement"*** or ***"Commencement Date"***: this Agreement will be deemed to have come into force on the Date of Commencement which shall be August 1, 2000, and shall be read and construed accordingly;

(f) ***"Effective Date of Termination"***: the date on which this Agreement is terminated pursuant to Article 18;

(g) ***"Field of Use"***: gene therapy being [†].

(h) ***"Xenon Improvements"***: improvements, variations, updates, modifications, and enhancements which relate to the Technology made solely by the Licensee or any sublicensees of the Licensee at any time after the Commencement Date that cannot be practised without infringing the claims of the Patents;

(i) ***"UBC Improvements"***: improvements, variations, updates, modifications, and enhancements which relate to the Technology made solely by the University at any time after the Commencement Date that cannot be practised without infringing the claims of the Patents;

(j) ***"Joint Improvements"***: improvements, variations, updates, modifications, and enhancements which relate to the Technology made jointly by the University and the Licensee or the University and any sublicensees of the Licensee at any time after the Commencement Date that cannot be practised without infringing the claims of the Patents;

(k) ***"Improvements"***: collectively the UBC Improvements, the Xenon Improvements and the Joint Improvements;

(l) ***"Information"***: any and all Technology and any and all Improvements, the terms and conditions of this Agreement and any and all oral, written, electronic or other communications and other information disclosed or provided by the parties including any and all analyses or conclusions drawn or derived therefrom regarding this Agreement and information developed or disclosed hereunder, or any party's raw materials, processes, formulations, analytical procedures, methodologies, products, samples and specimens or functions;

(m) ***"Patents"***: collectively the patents listed in Schedule "***A***", including any patents or patent applications that may be added to Schedule "***A***" from time to time, and any counterparts, Continuation-ln-Part, renewals, divisionals, reissues, corresponding international patent applications, continuations and any patents resulting therefrom. For greater certainty the Patents and Patent applications as herein defined shall include, any and all Patents or Patent Applications arising from, or relating to Improvements, including Improvements that result from the Collaborative Research Agreement between the parties, which Patents or Patent applications shall be added to Schedule "***A***";

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(n) ***"Product**(s)"*: goods manufactured in connection with the use of all or some of the Technology and/or any Improvements;

(o) ***"Revenue"***: [†], less the following deductions to the extent included in the amounts invoiced and thereafter actually allowed and taken:

(i) [†]

(ii) [†]

(iii) [†]

(iv) [†], and

(v) [†]

Where any Revenue is derived from a country other than Canada it shall be converted to the equivalent in Canadian dollars on the date the Licensee is deemed to have received such Revenue pursuant to the terms hereof at the rate of exchange set by the Bank of Montreal for buying such currency. The amount of Canadian dollars pursuant to such conversion shall be included in the Revenue;

(p) ***"Royalty Due Dates"***: the last working day of March, June, September and December of each and every year during which this Agreement remains in full force and effect;

(q) ***"Sublicensing Revenue"***: [†], but excluding:

(i) [†];

(ii) [†];

(iii) research fees received by the Licensee in reimbursement for the actual costs of research and development undertaken by the Licensee pursuant to a written research plan.

Where any Sublicensing Revenue is derived from a country other than Canada it shall be converted to the equivalent in Canadian dollars on the date the Licensee is deemed to have received such Sublicensing Revenue pursuant to the terms hereof at the rate of exchange set by the Bank of Montreal for buying such currency. The amount of Canadian dollars pursuant to such conversion shall be included in the Sublicensing Revenue;

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(r) ***"Technology"***: any and all knowledge, know-how and/or technique or techniques invented, developed and/or acquired, prior to the Date of Commencement by the University relating to, and including the technology described in Schedule "***A***" hereto, as amended from time to time, including, without limitation the Patents, and collectively the University's interest in the UBC Technology, the UBC – [†] Technology and the UBC—Amsterdam Technology (as hereinafter defined in Article 2.1) and all research, data, specifications, instructions, manuals, papers or other materials of any nature whatsoever, whether written or otherwise, relating to same; and

(s) ***"UBC Trade-marks"***: any mark, trade-mark, service mark, logo, insignia, seal, design, symbol or device used by the University in any manner whatsoever.

2.0 PROPERTY RIGHTS IN AND TO THE TECHNOLOGY:

2.1 The parties hereto hereby acknowledge and agree that:

(a) Dr. Michael Hayden has assigned his rights to the Technology and any Improvements to the University;

(b) the University owns any and all right, title and interest in and to the technology identified in UBC Invention Disclosure File # UBC 94-061, entitled "*Lipolipase Mutation 291, Implication for Coronary Artery Disease*", and File # UBC 91-003, entitled "*Mutation in Human Lipoprotein Lipase Gene which causes Type 1 Hyperlipoproteinemia*" as well as any and all UBC Improvements (the "UBC Technology");

(c) [†] has developed or acquired certain technology which has common subject matter with certain technology invented, developed and/or acquired by the University, and the University and [†] are named as joint owners within the United States of the technology identified in UBC Invention Disclosure File # UBC 99-082, entitled "*Recombinant Viruses Preparation and use thereof in Gene Therapy*" (the "***UBC – [†] Technology***");

(d) the University and AMC jointly own the technology identified in UBC Invention Disclosure File # UBC 00-039, entitled "*Mutation 447*" (the ***"UBC—Amsterdam Technology***"),

(e) the University and the Licensee, subject to the terms of this Agreement jointly own all Joint Improvements, and provided that notwithstanding the applicable patent or other intellectual property laws of any jurisdiction both the University and the Licensee shall only use and commercially exploit any Joint Improvements in accordance with the terms of this Agreement; and

(f) the Licensee, subject to the terms of this Agreement, owns any all right, title and interest in and to the Xenon Improvements.

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2.2 The Parties shall, on request, enter into such further agreements and execute any and all documents as may be required to ensure that ownership of the Technology, and any Improvements vest with, or remain with, the parties as set out in Article 2.1.

3.0 GRANT OF LICENSE:

3.1 In consideration of the license fees, milestone payments and royalty payments reserved herein, and the covenants on the part of the Licensee contained herein, the University hereby grants to the Licensee within the Field of Use:

(a) a worldwide exclusive license to use and sublicense the UBC Technology, any UBC Improvements or any Joint Improvements, and any Patents related thereto, including the right to manufacture, distribute, and sell Products and provide services on the terms and conditions hereinafter set forth during the term of this Agreement;

(b) a license of the University's rights to the UBC – [†] Technology and any UBC Improvements or Joint Improvements and any Patents related thereto, including the right to use and sublicense the University's rights in the UBC – [†] Technology and any UBC Improvements or Joint Improvements thereto, and to manufacture, distribute, and sell Products and provide services on the terms and conditions hereinafter set forth during the term of this Agreement. The University acknowledges and agrees that it shall not license within the Field of Use any of the University's rights to the UBC – [†] Technology or any UBC Improvements or Joint Improvements thereto to any entity other than the Licensee for the duration of the term of this Agreement;

(c) a worldwide co-exclusive license together with Amsterdam Molecular Therapeutics B.V. (***"AMT"***) of the University's rights to the UBC—Amsterdam Technology and any UBC Improvements or Joint Improvements and any Patents related thereto, including the right to use and sublicense the University's rights to the UBC -Amsterdam Technology and any UBC Improvements or Joint Improvements thereto, and to manufacture, distribute, and sell Products and provide services on the terms and conditions hereinafter set forth during the term of this Agreement. The Licensee acknowledges and agrees that AMC has granted a worldwide co-exclusive license to AMT to use and sublicense the UBC—Amsterdam Technology. The University acknowledges and agrees that it shall not license within the Field of Use any of the University's rights to the UBC—Amsterdam Technology or any UBC Improvements or Joint Improvements thereto to any entity other than the Licensee for the duration of the term of this Agreement;

3.2 The grant of the license:

(a) set out in Article 3.1(b) is made expressly subject to all of the rights which [†] has acquired to the UBC – [†] Technology. The Licensee hereby acknowledges that, the use, practice, exploitation and commercialization of any rights to the UBC – [†] Technology may be subject to the consent of [†], and that it shall be the Licensee's sole responsibility to obtain such consent from [†];

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(b) set out in Article 3.1(c) is expressly made subject to the conditions precedent that the written consent of AMC be obtained by the University prior to the grant of such a co-exclusive license to the Licensee.

In the event the University is unable to obtain the consent referred to in Article 3.2(b), the grant of license by the University to the Licensee herein shall be limited to the grant of license referred to in Article 3.1(a) and (b).

3.3 The licenses granted herein are personal to the Licensee and are not granted to any Affiliated Company or Affiliated Companies, subject to the right of the Licensee to sublicense as set out herein.

3.4 The Licensee shall not cross-license the Technology or any UBC Improvements or Joint Improvements without the prior written consent of the University.

3.5 Notwithstanding Article 3.1, and subject to Article 10.6 herein, the parties acknowledge and agree that the University may use the Technology and any Improvements (including UBC Improvements, Joint Improvements and Xenon Improvements) without charge in any manner whatsoever for research, scholarly publication, educational or other non-commercial uses. Except as expressly provided for above, the University may not use or license any Joint Improvements without the express, prior written consent of the Licensee.

4.0 SUBLICENSING:

4.1 The Licensee shall have the right to grant sublicenses to Affiliated Companies and other third parties with respect to the Technology and any Improvements with the prior written consent of the University, such consent not to be unreasonably withheld. The Licensee shall not be obligated to obtain the University's consent to the granting of a sublicense if the proposed sublicensee has a market capitalization in excess of CAN. $[†] at the time of the granting of the sublicense. Further, the University, subject to a full legal review and approval of the terms of such sublicense agreement and review of the performance terms in accordance with Article 11.3, hereby expressly consents to the Licensee granting a sublicense to AMT. The Licensee will furnish the University with a copy of each sublicense granted within 30 days after execution. The Licensee shall cause each sublicensee to indemnify the University on the same terms and conditions as are contained in Article 9.1 and which indemnity shall extend to cover any sub-sublicenses granted by such sublicensee.

4.2 Except as hereinafter provided, any sublicense granted by the Licensee shall be personal to the sublicensee and shall not be assignable without the prior written consent of the University, such consent not to be unreasonably withheld. A sublicensee may grant a further sub-sublicense to a third party for the purpose of developing, marketing, selling, manufacturing or distributing Products with the prior written consent of the University, such consent not to be unreasonably withheld. A sublicensee shall not be obligated to obtain the University's consent to

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the granting of a sub-sublicense if the proposed sub-sublicensee has a market capitalization in excess of CAN. $[†] at the time of the granting of the sub-sublicense. The sublicensee shall furnish the University with a copy of such sub-sublicense granted within 30 days after execution. A sublicense can be assigned without the consent of the University to an Affiliated Company of the sublicensee or as part of a merger, acquisition or other business combination in which all or substantially all of the assets of the sublicensee are transferred. All sublicenses and sub-sublicensees shall contain covenants by the sublicensee or sub-sublicensees to observe and perform the terms and conditions contained in this Agreement, to the extent that the same are applicable.

4.3 Upon execution of a sublicense with AMT, AMT may register such sublicense with the relevant patent authorities, in those jurisdictions in which AMT carries on business and/or has its chief place of business. The University will provide reasonable assistance to AMT with respect to such registrations, provided that all reasonable costs incurred by the University in association with such registrations, including all legal expenses, shall be paid for by AMT, or the Licensee in the event of any default in payment by AMT. The University will, on request by the Licensee, endeavour to provide an estimate of such costs.

5.0 ROYALTIES:

5.1 In consideration of the license granted hereunder, the Licensee shall pay to the University a royalty comprised of:

(a) [†]% of the Revenue, and

(b) [†]% of the Sublicensing Revenue.

For clarification, Sublicensing Revenue shall be exclusive of Revenue, such that in no event shall the Licensee owe royalties to the University under both of Articles 5.1(a) and 5.1(b) in respect of any given amount of revenue.

5.2 If commercial development by the Licensee of a Product or Products incorporating the Technology or any Improvements is not possible without licensing other technology from an arms length third party to be used in combination with the Technology or any Improvements, then [†]:

- [†] and
- [†]

[†]

5.3 The royalty shall become due and payable within [†] days of each respective Royalty Due Date and shall be calculated with respect to the Revenue and the Sublicensing Revenue in the three month period immediately preceding the applicable Royalty Due Date.

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5.4 All payments of royalties made by the Licensee to the University hereunder shall be made in Canadian dollars without any reduction or deduction of any nature or kind whatsoever, except as may be prescribed by Canadian law.

5.5 Products shall be deemed to have been sold by the Licensee and included in the Revenue when invoiced, or if not invoiced, then when delivered, shipped, or paid for, whichever is the first. Sublicensing Revenue shall be deemed to have been received by the Licensee with respect to each of its sublicensees when such consideration is actually received by the Licensee from its sublicensees.

5.6 Any transaction, disposition, or other dealing involving the Technology or any part thereof between the Licensee and another person that is not made at fair market value shall be deemed to have been made at fair market value, and the fair market value of that transaction, disposition, or other dealing shall be added to and deemed part of the Revenue or the Sublicensing Revenue, as the case may be, and shall be included in the calculation of royalties under this Agreement.

6.0 INITIAL LICENSE FEE, ANNUAL MAINTENANCE FEE AND MINIMUM ANNUAL ROYALTY:

6.1 As part of the consideration for the rights granted by the University to the Licensee hereunder, the Licensee agrees to issue to the University, as an initial license fee the sum of $[†] (Canadian funds) (the ***"Initial License Fee***"). The said sum shall be paid concurrently with the execution of this Agreement. Neither all nor any portion of the said sum shall be refundable to the Licensee under any circumstances.

6.2 The Licensee acknowledges and agrees that the University has agreed to accept the Initial License Fee on the condition that [†]

6.3 In further consideration for the license granted hereunder, the Licensee shall pay to the University, in addition to all other amounts due under this Agreement, an annual maintenance fee of CAN. $[†] payable on execution of this Agreement and thereafter on or before September 1st of each year during which this Agreement remains in full force and effect (the **"Annual Maintenance Fee**"). Neither all nor any part of the Annual Maintenance Fee paid shall be refundable to the Licensee under any circumstances.

6.4 In addition to all other payments due hereunder, the Licensee shall pay to the University the following milestones, for each product developed by the Licensee or a sublicensee:

(a) within [†] days of [†] the sum of CAN. $[†];

(b) within [†] days of [†], the sum of CAN. $[†]; and

(c) within [†] days of [†], the sum of CAN. $[†].

For greater clarity, it is agreed that the foregoing milestone payments shall be due and payable by the Licensee regardless of whether such milestones are achieved by the Licensee or a sublicensee, and such milestone payments shall in no way effect or diminish the royalties which are due and payable hereunder, and in particular, the calculation of the amount of royalty payable in connection with the Sublicensing Revenue.

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6.5 The Licensee shall pay to the University the milestones due under Article 6.4, in the timeframes provided under Article 6.4, with the following exceptions:

(a) [†]

(b) [†]:

(i) [†], or

(ii) [†]; and

6.6 For greater certainty, and notwithstanding any provisions within this Agreement to the contrary, the parties agree that:

(a) [†]; and

(b) [†].

7.0 PATENTS:

7.1 The Licensee shall have the right to identify any process, use or products arising out of the Technology and any UBC Improvements or any Joint Improvements that may be patentable including the right to apply for further patents in other jurisdictions, or continuations, continuations-in-part, divisions, reissues, re-examinations or extensions of the Patents or any further applications made hereunder, and shall take all reasonable steps to apply for such patents in the name of the University or jointly in the names of the University and the Licensee in the case of any patent relating to a Joint Improvement, provided that the Licensee pays all costs of applying for, registering and maintaining the patent in such jurisdictions as the Licensee may designate. The Licensee shall be responsible for the management, filing, prosecution and maintenance of such Patents, provided however, that the Licensee will obtain the University's prior consent, as to any material decision or action taken in the prosecution of such Patents, which consent shall not to be unreasonably withheld by the University. The Licensee shall also provide the University with copies of all correspondence and documents relating to the filing, prosecution and maintenance of the Patents. In the event that this Agreement is terminated for any reason whatsoever, the Licensee shall pay all outstanding costs relating to such patent applications to the date of termination and shall direct the patent agents responsible for such patent applications to take all further instructions, if any, relating to such applications from the University.

7.2 On the issuance of a patent in accordance with Article 7.1, the Licensee shall have the right to become, and shall become, the licensee of the same all pursuant to the terms contained herein.

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7.3 As of April 27, 2001, the University has incurred CAN. $80,091.70 in patenting the Technology. On execution of this Agreement, the Licensee will pay to the University the sum of CAN. $80,091.70 to reimburse the University for these costs. All further costs with respect to all Patents or Patent Applications relating to the Technology and any UBC Improvements or Joint Improvements, and all maintenance fees for such patents incurred by the University at any time after April 27, 2001, shall be reimbursed by the Licensee to the University within 30 days of presentation of receipts and/or invoices by the University to the Licensee. Without limiting the generality of the forgoing the Licensee agrees to pay for all costs with respect to the Patents, patent applications, divisionals, substitutions, continuations, continuations in part, all claims of foreign patent applications.

7.4 Should the Licensee decide to:

(a) discontinue pursuing patent protection in relation to the Patents, or any continuation, continuation-in-part, division, re-issue, re-examination or extension of the Patent(s), or

(b) not pursue patent protection in relation to the Patent(s) in any jurisdiction, or

(c) discontinue or not pursue patent protection in relation to any further process, use or products arising out of the UBC Improvements or Joint Improvements in any jurisdiction,

then the Licensee shall provide the University with a minimum of [†] days notice of its decision to discontinue or not to pursue such patent protection in sufficient time for the University to file a patent application, or continue pursuing an existing patent application. During the [†] day transition period the Licensee shall be responsible for all costs of filing, prosecuting and maintaining the Patents.

7.5 The Licensee shall provide to the University [†].

7.6 [†].

7.7 The Licensee will ensure proper patent marking for all Technology, and any UBC Improvements or Joint Improvements licensed hereunder and shall clearly mark the appropriate patent numbers on any Products made using the Technology and any UBC Improvements or Joint Improvements or any patented processes used to make such Products.

8.0 DISCLAIMER OF WARRANTY:

8.1 The University makes no representations, conditions or warranties, either express or implied, with respect to the Technology or any Improvements or the Products. Without limiting the generality of the foregoing, the University specifically disclaims any implied warranty, condition or representation that the Technology or any Improvements or the Products:

(a) shall correspond with a particular description;

[†] DESIGNATES PORTIONS OF THIS DOCUMENT THAT HAVE BEEN OMITTED PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT FILED SEPARATELY WITH THE COMMISSION

(b) are of merchantable quality;

(c) are fit for a particular purpose; or

(d) are durable for a reasonable period of time.

The University shall not be liable for any loss, whether direct, consequential, incidental or special, which the Licensee suffers arising from any defect, error, fault or failure to perform with respect to the Technology or any Improvements or Products, even if the University has been advised of the possibility of such defect, error, fault or failure. The Licensee acknowledges that it has been advised by the University to undertake its own due diligence with respect to the Technology and any Improvements.

8.2 The parties acknowledge and agree that the *International Sale of Goods Contracts Convention Act* and the United Nations Convention on Contracts for the International Sale of Goods have no application to this Agreement.

8.3 Nothing in this Agreement shall be construed as:

(a) a warranty or representation by the University as to title to the Technology and/or any Improvement or that anything made, used, sold or otherwise disposed of under the license granted in this. Agreement is or will be free from infringement of patents, copyrights, trade-marks, industrial design or other intellectual property rights;

(b) an obligation by the University to bring or prosecute or defend actions or suits against third parties for infringement of patents, copyrights, trade-marks, industrial designs or other intellectual property or contractual rights; or

(c) the conferring by the University of the right to use in advertising or publicity the name of the University or the UBC Trade-marks.

8.4 Notwithstanding Article 8.3, in the event of an alleged infringement of the Technology or any UBC Improvements or Joint Improvements or any right with respect to the Technology or any UBC Improvements or Joint Improvements, the Licensee or a sublicensee shall have, upon receiving the prior written consent of the University, such consent not to be unreasonably withheld, the right but not the obligation to prosecute litigation designed to enjoin infringers of the Technology or any UBC Improvements or Joint Improvements. The Licensee acknowledges and agrees that the University may require the consent of [†] and/or AMC, as appropriate (in so far as any UBC – [†] Technology or UBC—Amsterdam Technology is alleged to be infringed), prior to providing such consent. Provided that it has first granted its prior written consent, the University agrees to co-operate to the extent of executing all necessary documents and to vest in the Licensee or sublicensee the right to institute any such suits, so long as all the direct and indirect costs and expenses of bringing and conducting any such litigation or settlement shall be borne by the Licensee or sublicensee and in such event all recoveries shall enure to the Licensee or sublicensee.

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8.5 If any complaint alleging infringement or violation of any patent or other proprietary rights is made against the Licensee or a sublicensee of the Licensee with respect to the use of the Technology or any UBC Improvements or Joint Improvements or the manufacture, use or sale of the Products, the following procedure shall be adopted:

(a) the Licensee shall promptly notify the University upon receipt of any such complaint and shall keep the University fully informed of the actions and positions taken by the complainant and taken or proposed to be taken by the Licensee on behalf of itself or a sublicensee;

(b) except as provided in Article 8.5(d), all costs and expenses incurred by the Licensee or any sublicensee of the Licensee in investigating, resisting, litigating and settling such a complaint, including the payment of any award of damages and/or costs to any third party, shall be paid by the Licensee or any sublicensee of the Licensee, as the case may be;

(c) no decision or action concerning or governing any final disposition of the complaint shall be taken without full consultation with and approval by the University;

(d) the University may elect to participate formally in any litigation involving the complaint to the extent that the court may permit, but any additional expenses generated by such formal participation shall be paid by the University (subject to the possibility of recovery of some or all of such additional expenses from the complainant);

(e) notwithstanding Article 8.3, if the complainant is willing to accept an offer of settlement and one of the parties to this Agreement is willing to make or accept such offer and the other is not, then the unwilling party shall conduct all further proceedings at its own expense, and shall be responsible for the full amount of any damages, costs, accounting of profits and settlement costs in excess of those provided in such offer, but shall be entitled to retain unto itself the benefit of any litigated or settled result entailing a lower payment of costs, damages, accounting of profits and settlement costs than that provided in such offer; and

(f) the royalties payable pursuant to this Agreement shall be paid by the Licensee to the University in trust from the date the complaint is made until such time as a resolution of the complaint has been finalized. If the complainant prevails in the complaint, then the royalties paid to the University in trust pursuant to this Article shall be returned to the Licensee, provided that the amount returned to the Licensee hereunder shall not exceed the amount paid by the Licensee to the complainant in the settlement or other disposition of the complaint. If the complainant does not prevail in the complaint, then the University shall be entitled to retain all royalties paid to it pursuant to this Article.

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9.0 INDEMNITY AND LIMITATION OF LIABILITY:

9.1 The Licensee hereby indemnifies, holds harmless and defends the University, its Board of Governors, officers, employees, faculty, students, invitees and agents against any and all claims (including all legal fees and disbursements incurred in association therewith) collectively a ***"Claim***") arising out of the exercise of any rights under this Agreement including, without limiting the generality of the foregoing, against any damages or losses, consequential or otherwise, arising from or out of the use of the Technology or Products licensed under this Agreement by the Licensee or its sublicensees, and sub-sublicensees, or their customers or end-users howsoever the same may arise. A condition of this obligation is that, whenever the University has information from which it may reasonably conclude an incident has occurred which could give rise to a Claim, the University shall promptly give notice to the Licensee of all pertinent data surrounding such incident and, in the event a Claim is made or suit is brought the University shall assist the Licensee and cooperate in the gathering of information with respect to the time, place and circumstances and in obtaining the names and addresses of any injured parties and available witnesses. The University shall not voluntarily make any payment or incur any expense in connection with any such Claim without the prior written consent of the Licensee. The Licensee shall have control over the defence and settlement of any Claim, provided that the Licensee keeps the University informed of all activities in a timely manner. The obligations set forth in this Article 9.1 shall survive the expiration or termination of this Agreement.

9.2 Subject to Article 9.3, the University's total liability, whether under the express or implied terms of this Agreement, in tort (including negligence), or at common law, for any loss or damage suffered by the Licensee, whether direct, indirect or special, or any other similar or like damage that may arise or does arise from any breaches of this Agreement by the University, its Board of Governors, officers, employees, faculty, students or agents, shall be limited to the amount of the Initial License Fee paid pursuant to Article 6.1.

9.3 In no event shall the University be liable for consequential or incidental damages arising from any breach or breaches of this Agreement.

9.4 No action, whether in contract or tort (including negligence), or otherwise arising out of or in connection with this Agreement, may be brought by the Licensee more than six months after the cause of action has occurred.

10.0 PUBLICATION AND CONFIDENTIALITY:

10.1 The Information provided by the University shall be developed, received and used by the Licensee solely in furtherance of the purposes set forth in this Agreement subject to the terms and conditions set forth in this Article 10.

10.2 Each party hereto covenants and agrees that it will initiate and maintain an appropriate internal program limiting the internal distribution of the other party's Confidential Information to only those officers, employees and professional advisors who require said Confidential Information in performing their obligations under this Agreement and who have signed confidentiality and non-disclosure agreements in a form approved by the Licensee's Board of Directors in the case of the Licensee and in a form consistent with the terms of this Agreement in the case of the University.

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10.3 Subject to Article 10.8, the Licensee and the University shall not use, either directly or indirectly, any Confidential Information of the other party for any purpose other than as set forth herein without the other party's prior written consent.

10.4 If the Licensee or the University are required by judicial or administrative process to disclose any or all of the other party's Confidential Information, they shall promptly notify the other party and allow the other party reasonable time to oppose such process before disclosing any such Confidential Information.

10.5 Notwithstanding any termination or expiration of this Agreement, the obligations created in this Article 10 shall survive and be binding upon the Licensee and the University, and their successors and assigns.

10.6 The University shall not be restricted from presenting at symposia, national or regional professional meetings, or from publishing in journals or other publications, accounts of its research relating to the Information, provided that with respect to Confidential Information only, the Licensee shall have been furnished copies of the disclosure proposed therefor at least [†] days in advance of the presentation or publication date and does not within [†] days after receipt of the proposed disclosure object to such presentation or publication. Any objection to a proposed presentation or publication shall specify the portions of the presentation or publication considered objectionable (the ***"Objectionable Material"***). Upon receipt of notification from the Licensee that any proposed publication or disclosure contains Objectionable Material, the University and the Licensee shall work together to revise the proposed publication or presentation to remove or alter the Objectionable Material in a manner acceptable to the Licensee, in which case the Licensee shall withdraw its objection. If an objection is made, disclosure of the Objectionable Material shall not be made for a period of [†] months after the date the Licensee has received the proposed publication or presentation relating to the Objectionable Material. The University shall co-operate in all reasonable respects in making revisions to any proposed disclosures if considered by the Licensee to contain Objectionable Material. The University shall not be restricted from publishing or presenting the proposed disclosure as long as the Objectionable Material has been removed. After the 6 month period has elapsed the University shall be free to present and/or publish the proposed publication or presentation whether or not it contains Objectionable Material.

10.7 Subject to Article 10.8, the Licensee requires of the University, and the University agrees insofar as it may be permitted to do so at law, that this Agreement, and each part of it, is confidential and shall not be disclosed to third parties, as the Licensee claims that such disclosure would or could reveal commercial, scientific or technical information and would significantly harm the Licensee's competitive position and/or interfere with the Licensee's negotiations with prospective sublicensees. Notwithstanding anything contained in this Article, the parties hereto acknowledge and agree that the University may identify the title of this Agreement, the parties to this Agreement and the names of the inventors of the Technology and any Improvements.

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10.8 Notwithstanding the forgoing, the parties acknowledge and agree that the University and the Licensee may provide a copy of this Agreement to AMC, AMT and [†], and the University must provide certain reports and information to its Board of Governors, the Province of British Columbia and the government of Canada which may inter alia, include a summary of the terms of this Agreement and the activities thereunder.

11.0 PRODUCTION AND MARKETING:

11.1 The Licensee shall not use any of the UBC Trade-marks or make reference to the University or its name in any advertising or publicity whatsoever, without the prior written consent of the University, except as required by law and except that the Licensee and any of its sublicensees may disclose the existence and nature of this Agreement and (subject to the confidentiality provisions of Article 10) the nature of the technology being licensed without the need for the University's consent. Without limiting the generality of the foregoing, the Licensee shall not issue a press release with respect to this Agreement or any activity contemplated herein without the prior review and approval of same by the University, which approval shall not be unreasonably withheld, except as required by law. If the Licensee is required by law to act in contravention of this Article, to the extent permissible by law, the Licensee shall provide the University with sufficient advance notice in writing to permit the University to bring an application or other proceeding to contest the requirement.

11.2 The Licensee will not register or use any UBC Trade-marks in association with the Products without the prior written consent of the University.

11.3 The Licensee shall use its commercially reasonable efforts to [†]. The University acknowledges and agrees that subject to the University's prior review and approval of the terms in the contemplated sublicense between the Licensee and AMT pursuant to Article 4.1, the granting of such a sublicense by the Licensee to AMT will meet the forgoing obligation of the Licensee. Without limiting the generality of the foregoing, the Licensee covenants and agrees that it shall provide to the University, on each of the first five anniversaries of the Commencement Date of the License Agreement or the date of an amendment to the License Agreement, a written report (the ***"Status Report"***) summarizing the Licensee's development activities relating to the Technology and any Improvements that sets out all of the following information:

(a) a summary of the research and development activities that the Licensee has undertaken in the course of the preceding 12 months to develop and commercialize the Technology and any Improvements;

(b) a detailed summary of any and all improvements, variations, updates, modifications and enhancements to the Technology and any Improvements which the Licensee has developed and/or acquired in the course of the preceding 12 months, including any improvements, variations, updates, modifications and enhancements to the Technology or any Improvements of which the Licensee has been advised by any sublicensee, or sub-sublicensee of the Licensee; and

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(c) any and all corporate alliances formed by the Licensee related to the Technology or any Improvements in the course of the preceding 12 months, including any such corporate alliances of which the Licensee has been advised by a sublicensee or sub-sublicensee of the Licensee.

11.4 If the University is of the view that the Licensee is in material breach of Article 11.3, then the University shall notify the Licensee and the parties hereto shall appoint a mutually acceptable person as an independent evaluator (the ***"Evaluator"***) to conduct the evaluation set forth in Article 11.3. If that the parties cannot agree on such an Evaluator, the appointing authority shall be the British Columbia International Commercial Arbitration Centre.

11.5 Unless the Parties mutually agree otherwise, the following rules and procedures shall govern the conduct of the parties and the Evaluator before and during the investigation by the Evaluator:

(a) within [†] days of the appointment of the Evaluator each party shall provide to the Evaluator and the other party copies of all documents, statements and records on which the party intends to rely in presenting its position to the Evaluator;

(b) within [†] days of the appointment of the Evaluator the Licensee shall provide to the Evaluator and the University a written summary of its position. On receipt of the Licensee's summary the University shall have 15 days to prepare and submit to the Licensee and the Evaluator its own summary in reply to the summary submitted by the Licensee;

(c) on receipt of the documents, statements, records and summaries submitted by the parties the Evaluator shall have [†] days within which to conduct such further inquiries as he or she may deem necessary for the purpose of reviewing the efforts made by the Licensee with respect to the promotion, marketing and sale of the Products and the Technology and any Improvements in compliance with the requirements of Article 11.3. For the purpose of conducting such an inquiry, the Evaluator shall have the right to:

(i) require either party to disclose any further documents or records which the Evaluator considers to be relevant;

(ii) interview or question either orally (or by way of written questions) one or more representatives of either party on issues deemed to be relevant by the Evaluator;

(iii) make an "*on site*" inspection of the Licensee's facilities;

(iv) obtain if necessary, the assistance of an independent expert to provide technical information with respect to any area in which the Evaluator does not have a specific expertise;

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(d) On completion of the Inquiry described in Article 11.5(c) the Evaluator shall within [†] days prepare a report setting out his or her findings and conclusions as to whether or not the Licensee has committed a breach of Article 11.3. If the Evaluator has determined that the Licensee has committed a breach of Article 11.3, then the Evaluator shall also set out in the report his or her conclusions as to whether such breach:

(i) was substantially due to external market conditions not within the control of the Licensee, or

(ii) was substantially due to the Licensee's failure to use its commercially reasonable efforts to comply with the requirements of Article 11.3.

(e) The report and conclusions of the Evaluator shall be delivered to the Licensee and the University, and shall be accepted by both parties as final and binding.

11.6 If the Evaluator concludes:

(a) pursuant to Article 11.5(d)(i) that the Licensee's material breach was substantially due to external market conditions and not due to any omission or failure on the part of the Licensee, then the License granted hereunder shall continue in good standing,

(b) pursuant to Article 11.5(d)(ii) that the Licensee's material breach was substantially due to the Licensee's failure to use commercially reasonable efforts then the University shall at its option have the right to terminate this Agreement as provided in Article 18, or

(c) pursuant to Article 11.5(d) that the Licensee is not in material breach of Article 11.3, then the University shall not terminate this Agreement for breach of Article 11.3, nor shall it change the nature of the license granted hereunder.

11.7 The University may not call for more than one evaluation pursuant to Article 11.4 in each calendar year. The cost of an evaluation hereunder shall be borne [†].

12.0 ACCOUNTING RECORDS:

12.1 The Licensee shall maintain at its principal place of business, or such other place as may be most convenient, separate accounts and records of all Revenues, sublicenses and Sublicensing Revenues, and all business done pursuant to this Agreement, such accounts and records to be in sufficient detail to enable proper returns to be made under this Agreement, and the Licensee shall cause its sublicensees to keep similar accounts and records.

12.2 The Licensee shall deliver to the University on the date [†] days after each and every Royalty Due Date, together with the royalty payable thereunder, the Accounting and a report on all Sublicensing activity, including an accounting statement setting out in detail how the amount of Sublicensing Revenue was determined and identifying each sublicensee and the location of the business of each sublicensee.

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12.3 The calculation of royalties shall be carried out in accordance with generally accepted Canadian accounting principles (***"GAP"***), or the standards and principles adopted by the U.S. Financial Accounting Standards Board (***"FASB"***) applied on a consistent basis.

12.4 The Licensee shall retain the accounts and records referred to in Article 12.1 above for at least [†] years after the date upon which they were made and shall permit any duly authorized representative of the University to inspect such accounts and records during normal business hours of the Licensee at the University's expense. The Licensee shall furnish such reasonable evidence as such representative will deem necessary to verify the Accounting and will permit such representative to make copies of or extracts from such accounts, records and agreements at the University's expense. If an inspection of the Licensee's records by the University shows an under-reporting or underpayment by the Licensee of any amount to the University, in excess of [†]% for any [†] month period, then the Licensee shall reimburse the University for the cost of the inspection as well as pay to the University any amount found due (including any late payment charges or interest) within [†] days of notice by the University to the Licensee.

12.5 During the term of this Agreement, and thereafter, [†].

13.0 INSURANCE:

13.1 Unless satisfactory arrangements are made between the Licensee and the University with respect to a self-insurance program or the requirement for insurance hereunder is waived by the University [†] days prior to the commencement of any human clinical trials or other Product testing involving human subjects by the Licensee or any sublicensee, then the Licensee shall procure and maintain, during the term of this Agreement, the insurance outlined in Articles 13.2 and 13.3 and otherwise comply with the insurance provisions contained in Articles 13.2 and 13.3.

13.2 The Licensee shall give written notice to the University:

(a) [†] days prior to the commencement of any human clinical trials or other Product testing involving human subjects by the Licensee or any sublicensee, (***"Human Clinical Trials"***); and

(b) [†] days prior to the first sale of any Product by the Licensee or any sublicensee,

of the terms and amount of the appropriate public liability, product liability and errors and omissions insurance which it has placed. Such insurance shall in no case be less than the insurance which a reasonable and prudent businessperson carrying on a similar line of business would acquire. This insurance shall be placed with a reputable and financially secure insurance carrier, shall include the University, its Board of Governors, faculty, officers, employees, students, and agents as additional insureds, and shall provide primary coverage with respect to the activities contemplated by this Agreement. Such policy shall include severability of interest and cross-liability clauses and shall provide that the policy shall not be cancelled or materially altered except upon at least [†] days'

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written notice to the University. The University shall have the right to require reasonable amendments to the terms or the amount of coverage contained in the policy. Failing the parties agreeing on the appropriate terms or the amount of coverage, then the matter shall be determined by arbitration. The Licensee shall provide the University with certificates of insurance evidencing such coverage [†] days before commencement of Human Clinical Trials and [†] days prior to the sales of any Product and the Licensee covenants not to start Human Clinical Trials, or sell any Product before such certificate is provided and approved by the University, or to sell any Product at any time unless the insurance outlined in this Article 13.2 is in effect.

13.3 The Licensee shall require that each sublicensee under this Agreement shall procure and maintain, during the term of the sublicense, public liability, product liability and errors and omissions insurance in reasonable amounts, with a reputable and financially secure insurance carrier or provide satisfactory arrangements through an appropriate self-insurance program. The Licensee shall use its best efforts to ensure that any and all such policies of insurance required pursuant to this Article shall contain a waiver of subrogation against the University, its Board of Governors, faculty, officers, employees, students, and agents.

14.0 ASSIGNMENT:

14.1 Except as hereinafter provided, the Licensee will not assign, transfer, mortgage, charge or otherwise dispose of any or all of the rights, duties or obligations to it under this Agreement without the prior written consent of the University, (subject to the Licensee's right to sublicense without the prior written consent of the University pursuant to Article 4.1), such consent not to be unreasonably withheld. The Licensee may assign this license without the consent of the University as part of a merger, acquisition or other business combination in which all or substantially all of the assets of the Licensee are transferred.

14.2 The University shall have the right to assign its rights, duties and obligations under this Agreement to a company or society of which it is the sole shareholder, in the case of a company, or of which it controls the membership, in the case of a society. In the event of such an assignment, the Licensee will release, remise and forever discharge the University from any and all obligations or covenants, provided however that such company or society, as the case may be, executes a written agreement which provides that such company or society shall assume all such obligations or covenants from the University and that the Licensee shall retain all rights granted to the Licensee pursuant to this Agreement.

15.0 GOVERNING LAW

15.1 This Agreement shall be governed by and construed in accordance with the laws of the Province of British Columbia and the laws of Canada in force therein without regard to its conflict of law rules.

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16.0 NOTICES:

16.1 All payments, reports and notices or other documents that any of the parties hereto are required or may desire to deliver to any other party hereto may be delivered only by personal delivery or by registered or certified mail, telex or fax, all postage and other charges prepaid, at the address for such party set forth below or at such other address as any party may hereinafter designate in writing to the others. Any notice personally delivered or sent by telex or fax shall be deemed to have been given or received at the time of delivery, telexing or faxing. Any notice mailed as aforesaid shall be deemed to have been received on the expiration of five days after it is posted, provided that if there shall be at the time of mailing or between the time of mailing and the actual receipt of the notice a mail strike, slow down or labour dispute which might affect the delivery of the notice by the mails, then the notice shall only be effected if actually received.

If to the University:

If to the Licensee: The Managing Director
University—Industry Liaison Office
University of British Columbia
IRC 331—2194 Health Sciences Mall
Vancouver, British Columbia
V6T 1Z3
Telephone: (604)822-8580
Fax: (604)822-8589

If to the Licensee: The President
Xenon Genetics Inc.
Gerald McGavin Building
Suite 100—2386 East Mall
Vancouver, British Columbia
V6T 1Z3
Telephone: (604)221-8478
Fax: (604)221-8423

17.0 TERM:

17.1 This Agreement and the license granted hereunder shall terminate on the expiration of a term of 10 years from the Date of Commencement or the expiration of the last patent obtained pursuant to Article 7 herein, whichever event shall last occur, unless earlier terminated pursuant to Article 18 herein.

18.0 TERMINATION:

18.1 This Agreement shall automatically and immediately terminate without notice to the Licensee if any proceeding under the *Bankruptcy and Insolvency Act of Canada*, or any other statute of similar purport, is commenced by or against the Licensee provided such proceedings have not been dismissed within [†] days of the date on which they were commenced. In the event that the sublicense to be entered into between the Licensee and AMT is terminated, the Licensee may terminate this Agreement on [†] days prior written notice to the University, subject to payment of all amounts owed to the University.

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18.2 The University may, at its option, terminate this Agreement immediately on the happening of any one or more of the following events by delivering notice in writing to that effect to the Licensee:

(a) if any resolution is passed or order made or other steps taken for the winding up, liquidation or other termination of the existence of the Licensee;

(b) if the Licensee is more than [†] days in arrears of royalties or other monies that are due to the University under the terms of this Agreement after written notice;

(c) if the Technology or any Improvements becomes subject to any security interest, charge or encumbrance in favour of any third party , other than a sublicensee, granted by the Licensee without prior written consent of the University, not to be unreasonably withheld;

(d) if the Licensee ceases or threatens to cease to carry on its business;

(e) if the Licensee undergoes a reorganization or any part of its business relating to this Agreement is transferred to a subsidiary or associated company without the prior written consent of the University, such consent not to be withheld except as provided in Article 18.3 and to be provided within [†] days of receipt of a written request for the same;

(f) if the Licensee commits any breach of Articles 4.1, 11.1, 11.2 or 13;

(g) if it is determined, pursuant to Article 11.5, that the Licensee is in breach of Article 11.3;

(h) if any sublicensee of the Licensee is in breach of its sublicense agreement with the Licensee and the Licensee does not cause such sublicensee to cure such default within [†] days of receipt of written notice from the University requiring that the Licensee cause such sublicensee to cure such default, or

(i) if the Licensee is in breach of the Collaborative Research Agreement dated August 1, 2000, between the Licensee and the University, which breach has not been cured within the time provided for the curing of such breach under the terms of such other agreement.

18.3 The University shall not withhold its consent pursuant to Article 18.2(e) unless the granting of such consent would result in the University having a contractual relationship with an entity with whom the University is prohibited from contracting with pursuant to its then existing policies.

18.4 Other than as set out in Articles 18.1 and 18.2, if either party shall be in default under or shall fail to comply with the terms of this Agreement then the non-defaulting party shall have the right to terminate this Agreement by written notice to the other party to that effect if:

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(a) such default is reasonably curable within [†] days after receipt of notice of such default and such default or failure to comply is not cured within 30 days after receipt of written notice thereof; or

(b) such default is not reasonably curable within [†] days after receipt of written notice thereof, and such default or failure to comply is not cured within such further reasonable period of time as may be necessary for the curing of such default or failure to comply.

Any written notice issued pursuant to this Article 18.4 shall expressly set out the default or defaults with respect to which notice is being given.

18.5 If this Agreement is terminated pursuant to Article 18.1, 18.2, or 18.4, the Licensee shall make royalty payments to the University in the manner specified in Article 5, and 6 and the University may proceed to enforce payment of all outstanding royalties or other monies owed to the University and to exercise any or all of the rights and remedies contained herein or otherwise available to the University by law or in equity, successively or concurrently, at the option of the University. Upon any such termination of this Agreement, the 'Licensee shall forthwith deliver up to the University all Technology and any UBC Improvements in its possession or control and shall have no further right of any nature whatsoever in the Technology or any UBC Improvements. On the failure of the Licensee to so deliver up the Technology and any UBC Improvements, the University may immediately and without notice enter the Licensee's premises and take possession of the Technology and any UBC Improvements. The Licensee will pay all charges or expenses incurred by the University in the enforcement of its rights or remedies against the Licensee including, without limitation, the University's legal fees and disbursements on an indemnity basis.

18.6 The Licensee shall cease to use the Technology or any UBC Improvements in any manner whatsoever or to manufacture or sell the Products within five days from the Effective Date of Termination, subject to the expiration or invalidation of any applicable Patents. The Licensee shall then deliver or cause to be delivered to the University an accounting within 30 days from the Effective Date of Termination. The accounting will specify, in or on such terms as the University may in its sole discretion require, the inventory or stock of Products manufactured and remaining unsold on the Effective Date of Termination. The University will instruct that the unsold Products be stored, destroyed or sold under its direction, provided this Agreement was terminated by the University pursuant to Article 18.2 or 18.4 and subject to the expiration or invalidation of any applicable Patents. Without limiting the generality of the foregoing, if this Agreement was terminated pursuant to Article 18.1, the unsold Products will not be sold by any party without the prior written consent of the University. The Licensee will continue to make royalty payments to the University in the same manner specified in Article 5 and 6 on all unsold Products that are sold in accordance with this Article 18.6, notwithstanding anything contained in or any exercise of rights by the University under Article 18.5 herein.

18.7 Notwithstanding the termination of this Agreement, Article 12 shall remain in full force and effect until [†] years after

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(a) all payments of royalty required to be made by the Licensee to the University under this Agreement have been made by the Licensee to the University, and

(b) any other claim or claims of any nature or kind whatsoever of the University against the Licensee has been settled.

19.0 MISCELLANEOUS COVENANTS OF LICENSEE:

19.1 The Licensee hereby represents and warrants to the University that the Licensee is a corporation duly organized, existing and in good standing under the laws of Canada and has the power, authority and capacity to enter into this Agreement and to carry out the transactions contemplated by this Agreement, all of which have been duly and validly authorized by all requisite corporate proceedings.

19.2 The Licensee represents and warrants that [†].

19.3 The Licensee shall comply with all laws, regulations and ordinances, whether Federal, State, Provincial, County, Municipal or otherwise, with respect to the Technology and any Improvements and/or this Agreement.

19.4 [†]

19.5 [†]

19.6 The Licensee shall pay all taxes and any related interest or penalty howsoever designated and imposed as a result of the existence or operation of this Agreement, including, but not limited to, tax which the Licensee is required to withhold or deduct from payments to the University. The Licensee will furnish to the University such evidence as may be required by Canadian authorities to establish that any such tax has been paid. The royalties specified in this Agreement are exclusive of taxes. If the University is required to collect a tax to be paid by the Licensee or any of its sublicensees, the Licensee shall pay such tax to the University on demand.

19.7 The obligation of the Licensee to make all payments hereunder will be absolute and unconditional and will not, except as expressly set out in this Agreement, be affected by any circumstance, including without limitation any set-off, compensation, counterclaim, recoupment, defence or other right which the Licensee may have against the University, or anyone else for any reason whatsoever.

19.8 All amounts due and owing to the University hereunder but not paid by the Licensee on the due date thereof shall bear interest in Canadian dollars at the rate of one per cent (1 %) per month. Such interest shall accrue on the balance of unpaid amounts from time to time outstanding from the date on which portions of such amounts become due and owing until payment thereof in full.

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20.0 GENERAL:

20.1 Nothing contained herein shall be deemed or construed to create between the parties hereto a partnership or joint venture. No party shall have the authority to act on behalf of any other party, or to commit any other party in any manner or cause whatsoever or to use any other party's name in any way not specifically authorized by this Agreement. No party shall be liable for any act, omission, representation, obligation or debt of any other party, even if informed of such act, omission, representation, obligation or debt.

20.2 Subject to the limitations hereinbefore expressed, this Agreement shall enure to the benefit of and be binding upon the parties and their respective successors and permitted assigns.

20.3 No condoning, excusing or overlooking by any party of any default, breach or non-observance by any other party at any time or times in respect of any covenants, provisos or conditions of this Agreement shall operate as a waiver of such party's rights under this Agreement in respect of any continuing or subsequent default, breach or non-observance, so as to defeat in any way the rights of such party in respect of any such continuing or subsequent default or breach, and no waiver shall be inferred from or implied by anything done or omitted by such party, save only an express waiver in writing.

20.4 No exercise of a specific right or remedy by any party precludes it from or prejudices it in exercising another right or pursuing another remedy or maintaining an action to which it may otherwise be entitled either at law or in equity.

20.5 Marginal headings as used in this Agreement are for the convenience of reference only and do not form a part of this Agreement and are not be used in the interpretation hereof.

20.6 The terms and provisions, covenants and conditions contained in this Agreement which by the terms hereof require their performance by the parties hereto after the expiration or termination of this Agreement shall be and remain in force notwithstanding such expiration or other termination of this Agreement for any reason whatsoever.

20.7 If any Article, part, section, clause, paragraph or subparagraph of this Agreement shall be held to be indefinite, invalid, illegal or otherwise voidable or unenforceable, the entire Agreement shall not fail on account thereof, and the balance of this Agreement shall continue in full force and effect.

20.8 The parties hereto each acknowledge that the law firm of Richards Buell Sutton has acted solely for the University in connection with this Agreement and that all other parties hereto have been advised to seek independent legal advice.

20.9 This Agreement sets forth the entire understanding between the parties and no modifications hereof shall be binding unless executed in writing by the parties hereto.

20.10 Timeshall be of the essence of this Agreement.

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20.11 Whenever the singular or masculine or neuter is used throughout this Agreement the same shall be construed as meaning the plural or feminine or body corporate when the context or the parties hereto may require.

20.12 This Agreement may be executed in any number of counterparts, each of which when delivered will be deemed to be an original, for all purposes and will constitute one and the same instrument, binding on the parties, notwithstanding that all the parties are not signatories of the same counterpart.

20.13 In the event of a conflict arising between the interpretation of this Agreement and the Collaborative Research Agreement, the terms of this Agreement shall prevail.

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IN WITNESS WHEREOF the parties hereto have hereunto executed this Agreement on the 19th day of June, 2001 but effective as of the Date of Commencement.

SIGNED FOR AN ON BEHALF of)
THE UNIVERSITY OF BRITISH COLUMBIA)
by its duly authorized officers:)
)
/s/ David P. Jones) David P. Jones
Authorized Signatory) Associate Director
) University-Industry Liaison
Authorized Signatory)

THE CORPORATE SEAL OF)
XENOX GENETICS INC)
was hereunto affixed in the presence of:)
)
/s/ Frank Holler)
Authorized Signatory)
)
Authorized Signatory)

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SCHEDULE "***A***"

DESCRIPTION OF "***TECHNOLOGY***"

UBC File #	Title	Patents
94-061	Lipolipase Mutation 291, Implication for Coronary Artery Disease	U.S.: 5,658,729 U.S.: SN 08/817,192 Can.: SN 2,202,477 EPO: 95 93 75 98.1 (Ger., Fr., U.K., Switz.)
91-003	Mutation in Human Lipoprotein Lipase Gene which causes Type 1 Hyperlipoproteinemia	Can.: SN 2,035,177
99-082	Recombinant Viruses Preparation and use thereof in Gene Therapy	U.S.: SN 08/737,954 FR: 94/06759 PCT: FR 95/00669 CIP: SN 09/713,268
00-039	Mutation 447	PCT: CA00/00762

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This **AMENDING AGREEMENT** is dated for reference as of the 12th day of July, 2007.

BETWEEN:

XENON PHARMACEUTICALS INC. (formerly known as Xenon Genetics Inc.), having its head office at 3650 Gilmore Way, Burnaby, British Columbia, V5G 4W8

(the "**Company**")

OF THE FIRST PART;

AND:

THE UNIVERSITY OF BRITISH COLUMBIA, a corporation continued under the *University Act* of British Columbia and having its administrative offices at 2075 Wesbrook Mall, in the City of Vancouver, in the Province of British Columbia, V6T 1W5

(the "**University**")

OF THE SECOND PART.

WHEREAS:

A. The Company and the Consultant entered into a LPL License Agreement made as of August 1, 2000 (the "**LPL License Agreement**"); and

B. The parties now wish to make certain amendments to the LPL License Agreement, as detailed here in this Agreement (the "**Amending Agreement**").

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by all parties hereto, the Company and the University hereby covenant and agree as follows:

1 Capitalized terms used herein, which are not otherwise defined herein, shall have the meaning ascribed to such terms in the LPL License Agreement.

2 Section 6.4 of the LPL License Agreement is hereby amended as follows:

(a) Subsection 6.4(b) is hereby amended by deleting it in its entirety and substituting the following:

"(b) within [†] days of the initiation of Phase II Clinical Trials:

(i) for the first Product, the sum of CAN. $[†]; and/or

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(ii) for the second and each subsequent Product (as applicable) that [†], the sum of CAN. $[†].”

(b) Following subsection 6.4(c), the following new subsection 6.4(d) shall be added:

“(d) in the event that the Licensee or its sublicensee initiates a combined Phase I/Phase II Clinical Trial for any Product, the milestone payments noted above under subsections 6.4(a) and (b) shall not be applicable respecting said Product(s), and instead, the Licensee shall pay to the University, within thirty (30) days after the commencement of such combined Phase I/Phase II clinical trial:

(i) for the first Product, the sum of CAN. $[†]; and/or

(ii) for the second and each subsequent Product (as applicable) that [†], the sum of CAN. $[†].”

3. Section 1.1(q) and the definition of “**UBC License Milestones**” is hereby amended to include the combined Phase I/Phase II Clinical Trial milestone payments under subsection 6.4(d).

4. Except as amended herein, the LPL License Agreement remains in full force and effect, unamended.

5. This Agreement may be signed in counterparts, and delivered personally or by courier, mail, facsimile or electronically, each of which counterparts when executed by any of the signatories hereto shall be deemed to be an original and such counterparts shall together constitute one and the same Agreement.

IN WITNESS WHEREOF duly authorized signatories of the Company and the University, each after having had the opportunity to discuss this Amending Agreement with their respective legal advisors, have executed this Agreement on the date(s) indicated below but effective as of the Commencement Date.

XENON PHARMACEUTICALS INC.	**UNIVERSITY OF BRITISH COLUMBIA**
By: /s/ Simon N. Pimstone	/s/ J.P. Heale
Dr. Simon N. Pimstone President & CEO	J.P. Heale, Ph.D, MBA Associate Director
Date: July 17, 2007	Date: September 14, 2007

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XENON PHARMACEUTICALS INC.
AMENDED AND RESTATED STOCK OPTION PLAN

1. PURPOSE OF THE PLAN

Xenon Pharmaceuticals Inc. ("Xenon") hereby establishes a stock option plan for directors, officers and Service Providers (as defined below) of Xenon, to be known as the "Xenon Pharmaceuticals Stock Option Plan" (the "Plan"). The purpose of the Plan is to give directors, officers and Service Providers, as additional compensation, the opportunity to participate in the progress of Xenon by granting to such individuals options, exercisable over a period of 10 years, to buy shares of Xenon at a price equal to the market price prevailing on the date the option is granted.

2. DEFINITIONS

In this Plan, the following terms shall have the following meanings:

2.1 "Associate" means an associate as defined in the *Securities Act* (British Columbia).

2.2 "Board" means the board of directors of Xenon.

2.3 "Blackout Period" means any period during which an Optionee is prevented from trading the Shares pursuant to a policy of Xenon, including but not limited to Xenon's insider trading policy, as amended and in force from time to time, any lockup or similar agreement described in the first registration statement that is filed by Xenon and declared effective pursuant to Section 12(g) of the Exchange Act with respect to any class of Xenon's securities, and any lockup or similar agreement between Xenon and a third party restricting the trading of Shares;

2.4 "Business Day" means a day, other than Saturday, Sunday and any other day which is a statutory holiday in British Columbia, Canada or New York, U.S.A;

2.5 "Disability" means any disability with respect to an Optionee which the Board, in its sole and unfettered discretion, considers likely to prevent permanently the Optionee from:

(a) being employed or engaged by Xenon, in a position the same as or similar to that in which he was last employed or engaged by Xenon; or

(b) acting as a director or officer of Xenon.

2.6 "Exchange Act" means the United States Securities Exchange Act of 1934, as amended.

2.7 "Exchanges" means any stock exchange on which the Shares are listed at the time.

2.8 "Expiry Date" means the date set by the Board under section 3.1 of the Plan, as the last date on which an Option may be exercised.

2.9 “Grant Date” means the date specified in an Option Agreement as the date on which an Option is granted.

2.10 “Xenon” means Xenon Pharmaceuticals Inc. and its successors.

2.11 “Insider” means:

(a) an Insider as defined in the *Securities Act* (British Columbia), other than a person who is an Insider solely by virtue of being a director or senior officer of a subsidiary of Xenon; and

(b) an Associate of any person who is an Insider under subsection (a).

2.12 “Market Price” of Shares at any Grant Date means:

(a) if the Shares are listed and posted for trading on an Exchange, the closing price per Share on such Exchange (or, in the event that the Shares are listed on more than one Exchange, on such Exchange on which Shares are listed as is selected for the purpose by the Board) for the last day Shares were traded prior to the Grant Date;

(b) if the Shares are not listed on any Exchange, but are quoted on an over-the-counter market, the price per Share on the over-the-counter market determined by dividing the aggregate sale price of the Shares sold by the total number of such Shares so sold on the applicable market for the last day prior to the Grant Date; or

(c) if the Shares are not listed and posted for trading on a stock exchange or over-the-counter market, the price per Share as determined from time to time by the Board.

2.13 “Option” means an option to purchase Shares granted pursuant to this Plan.

2.14 “Option Agreement” means an agreement, in the form attached hereto as Schedule A, whereby Xenon grants to an Optionee an Option.

2.15 “Optionee” means each of the directors, officers and Service Providers granted an Option pursuant to this Plan and their heirs, executors and administrators.

2.16 “Option Price” means the exercise price per Share specified in an Option Agreement, adjusted from time to time in accordance with the provisions of subsection 3.1 and section 6.

2.17 “Option Shares” means the aggregate number of Shares which an Optionee may purchase under an Option.

2.18 “Plan” means this Xenon Pharmaceuticals Stock Option Plan.

2.19 “Shares” means the common shares in the capital stock of Xenon as constituted on the date of this Plan provided that, in the event of any adjustment pursuant to section 6, “Shares” shall thereafter mean the shares or other property resulting from the events giving rise to the adjustment.

2.20 “Service Provider” means:

(a) an employee or Insider of Xenon;

(b) any other person or company engaged to provide ongoing, management or consulting services for Xenon or for any entity controlled by Xenon; and

(c) any person who is providing ongoing management or consulting services to Xenon or to any entity controlled by Xenon indirectly through a company that is a Service Provider under subsection 2.18(b).

2.21 “Unissued Option Shares” means the number of Shares, at a particular time, which have been allotted for issuance upon the exercise of an Option but which have not been issued, as adjusted from time to time in accordance with the provisions of section 6, such adjustments to be cumulative.

3. GRANT OF OPTIONS

3.1 Option Terms

The Board may from time to time authorize the issue of Options to directors, officers and Service Providers of Xenon having such terms and conditions as the Board in its discretion deems consistent with the Plan. The Option Price under each Option shall be the Market Price on the Grant Date. The Expiry Date for each Option shall be set by the Board at the time of issue of the Option and shall be 10 years after the Grant Date. Options shall not be assignable by the Optionee.

3.2 Limits on Shares Issuable on Exercise of Options

The maximum number of Options (and the corresponding Option Shares issuable upon exercise of such Options) which from time to time may be reserved for issue under the Plan shall not exceed 7,800,000. For clarification, in determining at any time whether the maximum number of Options (or corresponding Option Shares) issuable under the Plan is reached, any Option that has been granted and exercised shall not be relevant or included in such determination.

3.3 Option Agreements

Each Option shall be confirmed by the execution of an Option Agreement setting out the terms and conditions of such Option as determined by the Board in accordance with section 3.1. Each Optionee shall have the option to purchase from Xenon the Option Shares at the time and in the manner set out in the Plan and in the Option Agreement applicable to that Optionee. The execution of an Option Agreement shall constitute conclusive evidence that it has been completed in compliance with this Plan.

4. EXERCISE OF OPTION

4.1 Manner of Exercise

(a) The Option shall be exercisable by delivering to Xenon a notice specifying the number of Shares in respect of which the Option is exercised together with payment in full for each such Share. Upon notice and payment there will be a binding contract for the issue of the Shares in respect of which the Option is exercised, upon and subject to the provisions of the Plan.

(b) The Board will determine the acceptable form of consideration for exercising an Option, including the method of payment. Such consideration may consist entirely of: (A) cash; (B) cheque; (C) other Shares, provided that such Shares have a Market Price on the date of surrender equal to the aggregate exercise price of the Option Shares as to which such Option will be exercised and provided that accepting such Shares will not result in any adverse accounting consequences to Xenon, as the Board determines in its sole discretion; (D) consideration received by Xenon under a broker-assisted (or other) cashless exercise program (whether through a broker or otherwise) implemented by Xenon in connection with the Plan; (E) by net exercise; (F) such other consideration and method of payment for the issuance of Shares to the extent permitted by the applicable securities laws and all applicable rules and regulations of all regulatory authorities to which Xenon is subject; or (G) any combination of the foregoing methods of payment.

4.2 General Rule

Subject to section 4.3 and to the terms of the Option regarding vesting, if any, an Option may be exercised to purchase any number of Shares up to the number of Unissued Option Shares at any time after the Grant Date up to 5:00 p.m. Vancouver time on the Expiry Date.

4.3 Termination of Affiliation

If an Optionee ceases to be a director, officer or Service Provider of Xenon, each Option held by the Optionee and granted under the Plan shall be exercisable as follows:

(a) *Death*

If the Optionee ceases to be a director, officer or Service Provider of Xenon due to death or Disability or, in the case of an Optionee that is a company, the death or Disability of the person who provides management or consulting services to Xenon or to any entity controlled by Xenon, each Option held by the Optionee shall be exercisable at any time up to but not after the earlier of the Expiry Date of that Option and the date which is 365 days after the date of death or Disability;

(b) *Termination or Voluntary Resignation*

Subject to subsections 4.3(c), 4.3(d) and 4.3(e) below, if an Optionee (or, in the case of an Optionee who satisfies the definition of "Service Provider" set out in subsection 2.18(c), the Optionee's employer) ceases to be employed or engaged by Xenon or voluntarily resigns or retires as a director, officer or Service Provider, each Option held by the Optionee shall be exercisable:

(i) subject to subsection 4.3(b)(ii) below, at any time up to but not after the earlier of the Expiry Date of that Option and the date which is ninety (90) days after the Optionee ceases to be employed or engaged by Xenon or voluntarily resigns or retires as a director, officer or Service Provider; or

(ii) in the case of an Optionee that is a director of Xenon and not otherwise employed or engaged as an officer or Service Provider of Xenon, at any time up to but not after the earlier of the Expiry Date of that Option and the date which is twenty-four (24) months after the Optionee ceases to be a director of Xenon;

(c) *Termination for Cause*

Subject to subsection 4.3(e) below, in the event that an Optionee's employment or engagement is terminated by Xenon for "cause" (as determined by Xenon in its sole discretion), any Options held by such Optionee shall be exercisable at any time up to but not after 5:00 p.m. Vancouver time on the date of termination of such Optionee's employment or engagement by Xenon;

(d) *Exercise Period if Xenon Becomes a "Public" Company*

Subject to subsection 4.3(e) below, in the event Xenon becomes a reporting issuer in any jurisdiction in Canada, or becomes a registrant with the United States Securities and Exchange Commission, the option exercise periods described in subsections 4.3(b)(i) and 4.3(b)(ii) above shall each be ninety (90) days after such Optionee ceases to be employed or engaged by Xenon or voluntarily resigns or retires as a director, officer or Service Provider; and

(e) *Board may Extend Exercise Period*

Notwithstanding any other provision of the Plan, the board of directors of Xenon may, at any time prior to the Expiry Date of an Option granted under the Plan, extend the period of time within which an Optionee may exercise such Option in the event such Optionee ceases to be a director, officer or Service Provider, provided that, except as provided in Section 4.4 below, any such extension shall not exceed the original Expiry Date of such Option.

4.4 Blackout Periods

Notwithstanding any other provision in this Article 4, if the expiry of an Option pursuant to Section 4.2, 4.3(a), 4.3(b), 4.3(d) or 7.2(c) occurs during a Blackout Period applicable to the Optionee or within five Business Days after the last day of a Blackout Period applicable to the Optionee, the expiry date for the Option will be the last day of such five Business Day period, provided, however, that the extension in this section 4.4 shall be applied to any Option held by an Optionee who is a U.S. taxpayer only to the extent that it would not violate Section 409A of the U.S. Internal Revenue Code of 1986, as amended.

4.5 Exclusion From Severance Allowance, Retirement Allowance or Termination Settlement

If the Optionee, or, in the case of an Option granted to an Optionee who falls under the definition of Service Provider set out in subsection 2.18(c), the Optionee's employer, retires, resigns or is terminated from employment or engagement with Xenon, the loss of any right to purchase Shares pursuant to sections 4.3, 5, 6 or 7 shall not give rise to any right to damages and shall not be included in the calculation of nor form any part of any severance allowance, retiring allowance or termination settlement of any kind whatever in respect of such Optionee.

5. THIRD PARTY OFFER

Subject to section 7, at any time when an Option granted under the Plan remains unexercised with respect to any Option Shares, an offer to purchase all of the issued and outstanding Shares is made by a third party, Xenon may, upon giving each Optionee written notice to that effect, require the acceleration of the time for the exercise of the unexercised Options granted under the Plan and of the time for the fulfilment of any conditions or restrictions on such exercise.

6. ALTERATIONS IN OPTION SHARES

Subject to section 7, in the event of a stock dividend, subdivision, redivision, consolidation, share reclassification, amalgamation, merger, consolidation, corporate arrangement, reorganization, liquidation or the like of or by Xenon, the Board may, subject to any required prior regulatory approval, make adjustments, if any, to the number of Option Shares that may be purchased upon exercise of unexercised Options or to the Option Price therefor, or both, as it shall deem appropriate and may amend the Option Agreements relating to those

Options to give effect to such adjustments and may adjust the maximum number of Option Shares available under the Plan as may be appropriate. If because of a proposed merger, amalgamation or other corporate arrangement or reorganization, the exchange or replacement of Option Shares for shares or other securities in another company is imminent, the Board of Directors may, in a fair and equitable manner and subject to prior regulatory approval, determine the manner in which all unexercised Options granted under the Plan shall be treated including, for example, requiring the acceleration of the time for the exercise of such Options by the Optionees and of the time for the fulfilment of any conditions or restrictions on such exercise.

7. CHANGE OF CONTROL

7.1 Definitions

In this section, the following terms shall have the following meanings:

(a) "Cause" means conduct by a Departing Service Provider that is finally determined (after all rights of appeal have been exhausted or have expired) by a court of competent jurisdiction to be, or is agreed in writing by such person to be, conduct that would absent any contrary express agreement entitle Xenon to terminate the Departing Service Provider's employment or engagement with Xenon without any notice or compensation in lieu thereof.

(b) "Change of Control" means

(i) a dissolution, liquidation or sale of all or substantially all of the assets of Xenon;

(ii) a merger, consolidation, amalgamation, arrangement or reorganization in which Xenon is not the surviving corporation;

(iii) a reverse merger in which Xenon is the surviving corporation but the Shares outstanding immediately preceding the merger are converted by virtue of the merger into other property, whether in the form of securities, cash or otherwise; or

(iv) the acquisition by any person, entity or group within the meaning of Section 13(d) of the Exchange Act, or any comparable successor provisions (excluding any employee benefit plan, or related trust, sponsored or maintained by Xenon) of the beneficial ownership (within the meaning of Rule 13d-3 promulgated under the Exchange Act, or comparable successor rule) of securities of Xenon representing at least 35% of the combined voting power entitled to vote in the election of directors.

(c) "Departing Service Provider" means a director, officer or Service Provider of Xenon (or, in the case of a person who satisfies the definition of Service Provider set out in subsection 2.18(c), such person's employer) who has ceased to be employed or engaged by Xenon as a result of termination by Xenon or the resignation or retirement of such Service Provider.

(d) "Good Reason" means any of the following:

(i) without the express written consent of the Departing Service Provider, any change or series of changes in the responsibilities or status of the Departing Service Provider with Xenon, such that immediately after such change or series of changes the responsibilities and status of the Departing Service Provider, taken as a whole, and taking into account the size and complexity of the business of Xenon, are not at least substantially equivalent to those assigned to him immediately prior to such change or series of changes, except in connection with a termination of the Departing Service Provider's employment or engagement by Xenon for Cause; or

(ii) a reduction by Xenon in the Departing Service Provider's annual salary as in effect prior to the Change of Control; or

(iii) the taking of any action by Xenon, or the failure by Xenon to take any action, that would materially adversely affect the Departing Service Provider's participation in, or materially reduce the Departing Service Provider's benefits under, the package of incentive, bonus, compensation, pension, life insurance, health, accident disability and other similar plans in which the Departing Service Provider is participating prior to the Change of Control, or the taking of any action by Xenon, or the failure by Xenon to take any action, that would deprive the Departing Service Provider of any material fringe benefit or perquisite enjoyed by the Departing Service Provider prior to the Change of Control; or

(iv) the requirement that the Departing Service Provider be based anywhere other than Xenon's principal offices or locations in Vancouver and Burnaby, British Columbia (or, if the Departing Service Provider is presently based at Xenon's offices at another place, the requirement that the Departing Service Provider be based anywhere other than such offices at such place) or the requirement that the Departing Service Provider travel on Xenon's business to an extent that is not substantially consistent with the Departing Service Provider's travel obligations prior to the Change of Control, or in the event the Departing Service Provider consents to any such relocation, the failure by Xenon to pay (or reimburse the Departing Service Provider for) all reasonable moving expenses incurred by the Departing Service Provider or to indemnify the Departing

Service Provider against any excess in (1) the cost of a principal residence in the new location which is comparable to the Departing Service Provider's principal residence at the time of relocation, over (2) the amount realized by the Departing Service Provider upon the sale of his principal residence at the time of the relocation; or

(v) the failure of Xenon to obtain from a Successor Corporation that acquires all or substantially all of the business and/or assets of Xenon the agreement in favour of the Departing Service Provider contemplated by section 7.3; or

(vi) any reason which would be considered to amount to constructive dismissal by a court of competent jurisdiction;

but "Good Reason" shall not have occurred or exist by reason only of a request by Xenon to the Departing Service Provider to remain with Xenon for up to three months after a Change of Control, to assist in the transition resulting from the Change of Control, where there is no other event or omission that would constitute "Good Reason" according to subsections 7.1(d)(i),(ii),(iii),(iv),(v) or (vi) above.

(e) "Successor Corporation" means, in connection with a Change of Control, the surviving or acquiring corporation.

7.2 Change of Control

Notwithstanding the provisions of sections 5 and 6, in the event of a Change in Control:

(a) any Successor Corporation shall assume Xenon's obligations in respect of all outstanding Options or shall deliver to each holder of Options, in substitution for such Options, options to purchase securities of such Successor Corporation ("Successor Options") equivalent in value to such holder's Options; or

(b) in the event that a Successor Corporation does not assume Xenon's obligations in respect of outstanding Options or substitute Successor Options in exchange for such Options:

(i) the vesting of all Options held by persons who are directors, officers or Service Providers at the time of such Change of Control, and the time during which such Options may be exercised, shall be accelerated prior to completion of the Change of Control and, unless exercised after such acceleration and prior to completion of the Change of Control, such Options shall be terminated; and

(ii) all outstanding Options held by persons who are not directors, officers or Service Providers at the time of such Change of Control shall be terminated unless exercised prior to the Change of Control.

(c) In addition to subsections 7.2 (a) and (b) above, any Options or Successor Options held by a director, officer or Service Provider shall immediately become fully vested, and exercisable in accordance with Article 4 herein, in the event that, within 12 months following completion of a Change of Control, such director, officer or Service Provider becomes a Departing Service Provider by reason of (1) a termination of such director, officer or Service Provider (or, in the case of an Option or Successor Option held by a person who satisfies the definition of Service Provider set out in subsection 2.18(c), the termination of such person's employer) by Xenon or the Successor Corporation other than for Cause or (2) resignation or retirement by such director, officer or Service Provider (or, in the case of an Option or Successor Option held by a person who satisfies the definition of Service Provider set out in subsection 2.18(c), resignation of such person's employer) for Good Reason.

7.3 Binding on Successor Corporations

Xenon will require any Successor Corporation (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of

Xenon, by agreement in favour of each person who is a director, officer or Service Provider at the time of a Change of Control to expressly assume and agree to observe and perform all the obligations of Xenon that would be required to be observed or performed by Xenon in the event that within 12 months of completion of the Change of Control that led to such successorship, such person becomes a Departing Service Provider. For the purposes of this section 7, "Xenon" shall mean Xenon as herein before defined and any successor to its business and/or assets as aforesaid which executes and delivers the agreement provided for in this section or which otherwise becomes bound by all the terms and provisions of the Plan by operation of law.

8. MISCELLANEOUS

8.1 Form of Notice

A notice given to Xenon shall be in writing, signed by the Optionee and delivered to the Secretary of Xenon.

8.2 Right to Employment

Neither this Plan nor any of the provisions hereof shall affect in any way the Optionee's right to continued employment with Xenon or Xenon's right to terminate such employment.

8.3 Amendment and Waiver

Xenon may from time to time amend any provisions of the Plan, subject to prior regulatory approval where required, but no such amendment can impair any of the rights of any Optionee under any Option then outstanding.

8.4 No Assignment

No Optionee may assign any of his rights under the Plan.

8.5 Conflict

In the event of any conflict between the provisions of this Plan and an Option Agreement, the provisions of this Plan shall govern.

8.6 Time of Essence

Time is of the essence of this Plan and of each Option Agreement. No extension of time will be deemed to be or to operate as a waiver of the essentiality of time.

8.7 Entire Agreement

This Plan and the Option Agreement sets out the entire agreement between Xenon and the Optionees relative to an Option and supersedes all prior agreements, undertakings and understandings, whether oral or written.

SCHEDULE A
XENON PHARMACEUTICALS INC.
STOCK OPTION PLAN - OPTION AGREEMENT

This Option Agreement is entered into between Xenon Pharmaceuticals Inc. ("Xenon") and the Optionee named below pursuant to the Xenon Stock Option Plan (the "Plan"), a copy of which is attached hereto, and confirms that:

1. on — (the "Grant Date");
2. — (the "Optionee");
3. was granted the option to purchase — Common Shares (the "Option Shares") of Xenon;
4. for the price (the "Option Price") of $— per share;
5. vesting over a — year term as follows: —;
6. all fully-vested options are exercisable, in whole or in part, up to — (the "Expiry Date")

all on the terms and subject to the conditions set out in the Plan.

By signing this Option Agreement, the Optionee acknowledges that the Optionee has read and understands the Plan and agrees to the terms and conditions of the Plan and this Option Agreement.

IN WITNESS WHEREOF the parties have executed this Option Agreement as of the day of , 20 .

XENON PHARMACEUTICALS INC.

By: _____
Simon N. Pimstone
President & CEO

By: _____
—

XENON

October 3, 2014

Confidential

Via Electronic Mail

Simon N. Pimstone
c/o Xenon Pharmaceuticals Inc.
3650 Gilmore Way
Burnaby, BC V5G 4W8

XENON
PHARMACEUTICALS INC.

3650 Gilmore Way
Burnaby, BC
Canada V5G 4W8

T 604-484-3300
F 604-484-3450

www.xenon-pharma.com

Dear Simon,

Re: Offer of Continued Employment

We are pleased to offer you continued employment with Xenon Pharmaceuticals Inc. (the "**Company**"), on the terms and conditions herein, and in consideration for the change of control protections provided to you by the Company. This Agreement will replace and supersede your existing employment agreement in its entirety; please read it carefully. If you wish to accept the terms herein, please execute and return this agreement to me today (the "**Effective Date**").

As of the Effective Date, you will continue to be engaged by the Company in the full-time position of President & CEO.

A. Base Salary. As of the Effective Date, you will continue to earn a base salary of $392,202 per year, less statutory and other applicable deductions as required, for all work and services you perform for the Company (the "**Base Salary**"). The Base Salary is payable semi-monthly in arrears in accordance with the Company's applicable payroll policies.

B. Annual Discretionary Bonus. In addition to your Base Salary, you are eligible to earn an annual discretionary bonus of up to 50% percent of your Base Salary, less statutory and other applicable deductions as required, for each completed calendar year of service. You will be eligible for this bonus in respect of the full 2014 calendar year without regard to the Effective Date. The payment and amount of the annual bonus is within the sole discretion of the Board of Directors (the "**Board**") and will be evaluated in January of each year in relation to the achievement of corporate and personal objectives. Such objectives will be established annually by the Board in its sole discretion. If you work the entire bonus year, you will be eligible for an annual discretionary bonus determined in the ordinary course using relevant criteria in a manner consistent with prior practice, even if the Company terminates your employment after the bonus year prior to the payment of the annual bonuses.

C. Annual Review. Your compensation package, including your salary and bonus percentage, will continue to be reviewed annually; any adjustment to the same is at the sole discretion of the Company provided that the Base Salary will not be reduced without your consent and subject to Sections L and M of this Agreement.

D. Expense Reimbursement. In accordance with its expense policy as amended from time to time, the Company will reimburse any authorized expenses actually and reasonably incurred in the course of performing your employment

duties. The Company will also provide to you, for the duration of your employment, any necessary work tools, such as a laptop computer and mobile phone. Subject to approval by the Company, you will also be reimbursed for out-of-pocket expenses incurred for attending courses or workshops related to your employment duties.

E. Reporting Structure/Responsibilities. You will report to the Board of Directors of the Company (the "Board"). You will continue to perform the responsibilities and duties of your position, and subject to Sections L and M such other responsibilities and duties as may be requested by the Board from time to time. You will at all times continue to: (i) conform to the reasonable and lawful directions of the Company and the Board; (ii) adhere to all applicable Company policies; (iii) give the Company the full benefit of your knowledge, expertise, skill and ingenuity; (iv) well and faithfully serve the Company; (v) devote your best efforts to furthering the interests of the Company; and (vi) exercise the degree of care, diligence and skill that a prudent executive would exercise in comparable circumstances.

You will not during your employment with the Company, be employed by, or provide products or services of any nature whatsoever to, any other person, company, organization or other entity without prior written permission from the Company. This does not restrict you from performing reasonable volunteer activities; however, you must obtain the consent of the Company if you wish serve on a board of directors or advisory board, or if you perform any paid work or services for another organizations. Schedule A contains a description of all such appointments and positions that you currently occupy, and all paid work and services you currently provide to outside organizations, to which the Company confirms that it has provided, and continues to provide, at its discretion, its permission.

F. Vacation and Sick Days. In accordance with the Company's policies, you will earn twenty (20) days of vacation per calendar year on a pro rata basis, and accrue five (5) sick days per calendar year on a pro rata basis. You must take your vacation within twelve (12) months of it being earned. Unused sick days will not be paid out at the end of the calendar year and may not be carried over.

G. Non-Disclosure, Non-Solicitation & Non-Competition Agreement. As a condition of entering into this agreement, you must enter into the enclosed Employee Non-Disclosure, Non-Solicitation and Non-Competition Agreement. Please note that this agreement also deals with confidentiality and the ownership of intellectual property developments. By entering into this agreement, you are agreeing that compliance with its provisions is reasonable and a necessary requirement in our highly competitive industry, and may be required by our agreements with our suppliers, customers, and distributors.

H. Stock Options. You will be eligible to participate in (i) the Company's Amended and Restated Stock Option Plan (the "**Current SOP**"), a current copy of which is enclosed with this Agreement, and (ii) if implemented, the 2014 Equity Incentive Plan that the Company is planning to adopt in connection with an initial public offering of the Company under the *US Securities Exchange Act* of 1934 (the "**2014 EIP**"), a current copy of which is enclosed with this Agreement, each as amended from time to time (together referred to as the "**Stock Option Plan**"). Nothing in this Agreement will affect in any way the stock options granted to you by the Company to date, all of which will, except as expressly provided in this

Agreement, continue to vest and be exercisable in accordance with the terms of the Company's grant and the applicable stock option plan of the Company (all applicable prior stock option plans, and the Stock Option Plan, are referred to as the "**Stock Option Plans**").

I. Benefits. You will be eligible to continue to participate in the Company's employee group benefit plans as offered to the Company's executives, and as amended, from time to time, subject to the Company's policies, eligibility rules, and the terms established by the service providers, as amended from time to time. You will be eligible to continue to participate in the Company's current Group RRSP Plan, under which the Company will pay you the greater of (i) an amount equal to your annual RRSP contributions or (ii) 5% of your Base Salary, provided that the Company will pay the portion equal to your RRSP annual contribution limit directly to your RRSP account and the balance directly to you, less applicable withholdings and deductions (the "**RRSP Contributions**").

J. Taxes. Any taxes, withholdings and premiums applicable to your employment compensation package with the Company will be deducted and remitted to the appropriate authorities and service providers in accordance with the Company's standard policies and the law.

K. Insurance and Indemnification. As an officer of the Company, you will be covered by its Directors' and Officers' Liability Insurance Policy, subject to the terms of the policy and any amendments made from time to time at the Board's discretion. Your coverage under such insurance policy will continue after your employment ends, in respect of your employment, subject to the terms of the policy.

L. Change of Control. In this Agreement:

a. "**Average Bonus**" means an amount that is (i) the sum of the annual bonus awards (expressed as a percentage of the applicable year's Base Salary) that you earned in each of the three (3) completed calendar years preceding the date your employment with the Company terminates, divided by (ii) three (3), multiplied by (iii) your Base Salary at the time your employment with the Company terminates [for example (15% + 5% + 10%) /3 = 10% of Base Salary].

b. **"Change of Control**" means:

   (i) the acquisition by any person or persons acting jointly or in concert (as determined by the Securities Act) ("**Person**"), whether directly or indirectly, of voting securities of the Company that, together with all other voting securities of the Company held by such Person, constitute in the aggregate more than 50% of all outstanding voting securities of the Company; provided, however, that for purposes of this subsection, the acquisition of additional securities by any one Person, who owns more than 50% of all outstanding voting securities of the Company will not be a Change of Control;

   (ii) an amalgamation, arrangement or other form of business combination of the Company with another corporation that results in the holders of voting securities of that other corporation holding, in the aggregate, more than 50% of all outstanding voting securities of the corporation resulting from the

business combination; provided, however, that for purposes of this subsection, the acquisition of additional securities by any one Person, who owns more than 50% of all outstanding voting securities of the Company will not be a Change of Control; or

(iii) a change in the ownership of a substantial portion of the Company's assets, including the sale, lease, transfer or exchange of a substantial portion of the Company's assets, to another Person, other than in the ordinary course of business of the Company, which occurs on the date that such Person acquires (or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than fifty percent (50%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions; provided, however, that for purposes of this subsection (iii), the following will not constitute a change in the ownership of a substantial portion of the Company's assets: (A) a transfer to a Related Entity, or (B) a transfer of assets by the Company to: (1) a stockholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company's stock, (2) an entity of which the Company has Control, (3) a Person, that owns, directly or indirectly, fifty percent (50%) or more of the all outstanding voting securities of the Company, or (4) an entity of which a Person described in this subsection (iii)(B)(3) has Control. For purposes of this subsection (iii), gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets;

provided, however, that a Change in Control will not be deemed to have occurred if such Change in Control results solely from the issuance, in connection with a *bona fid*e public offering, financing or series of financings by the Company, of voting securities of the Company or any rights to acquire voting securities of the Company which are convertible into voting securities.

Further and for the avoidance of doubt, a transaction will not constitute a Change of Control if: (x) its sole purpose is to change the state or jurisdiction of the Company's incorporation, or (y) its sole purpose is to create a holding company the voting securities of which will be owned in substantially the same proportions by the persons who held the Company's voting securities immediately before such transaction.

c. **"Good Reason**" means any of the following occurring within twelve (12) months after the occurrence of a Change of Control:

(i) any unilateral change or series of adverse changes to your employment responsibilities, reporting relationship or status within the Company, such that immediately after such a change or series of adverse changes to your responsibilities, reporting relationship and status, taken as a whole, and taking into account the size and complexity of the business of the Company at that time, are substantially less than those assigned to you immediately prior to such change or series of adverse changes; or

(ii) a material reduction by the Company in your Base Salary or other compensation as in effect prior to the Change of Control that would constitute a constructive dismissal at common law; or

(iii) the taking of any action by the Company, or the failure by the Company to take any action, that would materially adversely affect your participation in, or materially reduce your aggregate benefits under, the total package of incentive, bonus, compensation, RRSP, life insurance, health, accident disability and other similar plans in which you are participating prior to the action by the Company or the failure by the Company to take any action; or

(iv) the unilateral requirement that you relocate anywhere outside Metro Vancouver (or, if based at the Company's offices in another place, the requirement that you relocate somewhere else) where the new location you are required to report to is either not in Canada or both (i) more than 60 kilometers from your previous work location and (ii) more than 60 kilometers from your primary residence; or

(v) failure or refusal of the Successor Company to offer you terms and conditions of employment, including the provisions of Section M of this Agreement, that are substantially the same as the provisions of this Agreement;

(vi) subject to the terms of this Agreement, any reason which would be considered to amount to constructive dismissal by an arbitrator under the laws applicable in British Columbia; or

(vii) termination of your employment without cause by the Company or a Successor Company,

provided that any change or series of in reporting relationship alone will not constitute good reason.

d. "**Successor Company**" means, in connection with a Change of Control, the surviving or acquiring company or entity.

M. Good Reason in Connection With or Following Change of Control: In the event of Good Reason, where the Good Reason occurs:

a. prior to the Change of Control but is related or connected to the Change of Control; or

b. within twelve (12) months of the date of the Change of Control,

then your employment will end on the date it is terminated by the Company or Successor Company or the date terminated by you for Good Reason, in which case the Company or Successor Company will provide you with the following:

a. twelve (12) months' Base Salary, plus one (1) additional month of Base Salary for every year of consecutive service with the Company and Successor Company including service prior to the Effective Date, up to a combined maximum of eighteen (18) months (the "**Payment Period**");

b. payment of your Average Bonus pro-rated for the period of the bonus year you actually worked, less statutory and other applicable deductions as required, payable within four (4) weeks of the termination date provided that if a bonus has not yet been determined for the preceding completed calendar year, the Company or Successor Company will first make that determination in the ordinary course using relevant criteria in a manner consistent with prior practice so that the Average Bonus can then be determined and paid in accordance with this provision;

c. the RRSP Contributions the Company or Successor Company would have paid on your behalf during the Payment Period and, if unpaid, for the period earned and accrued up to the termination of your employment;

d. notwithstanding any provision in the Stock Option Plans to the contrary:

   (i) immediate vesting of all unvested stock options and other deferred compensation awards already granted to you by the Company or the Successor Company;

   (ii) with respect to stock options granted pursuant to the Current SOP and any prior stock option plan, continued exercise rights up to ninety (90) days after the end of the Payment Period, at which time such rights will be null and void; and

   (iii) with respect to stock options and other deferred compensation granted pursuant to the 2014 EIP and any subsequent deferred compensation plan, continued exercise rights for the longer of the period stipulated in the applicable plan or grant and 6 months from the termination of your employment.

e. subject to the applicable insurer's terms of coverage, the Company or Successor Company will arrange for you to continue to receive group benefits insurance coverage up to the earlier of (i) the end of the Payment Period, or (ii) the date you commence full-time employment. In the event the insurer does not continue coverage, the Company will pay you an amount equivalent to the cost of the monthly premiums the Company would have paid on your behalf for the group benefits insurance coverage that are terminated.

In the case of Good Reason (other than Good Reason under Section L.c.(vii)), you must provide the Company or Successor Company with thirty (30) days' written notice of Good Reason within three (3) months of the occurrence of Good Reason or, where based on a series of changes, within three (3) months from the occurrence of the last change in the series of changes. Where the Good Reason is based in whole or in part on a series of changes, the notice period that is based on three (3) months from the occurrence of Good Reason will commence on the occurrence of the last change in the series. Within thirty (30) days of receipt of written notice of Good Reason, the Company or the Successor Company may correct, reverse, rectify or otherwise resolve the change or series of changes that constitute Good Reason, in which case your employment with the Company or Successor Company will continue.

The payments above will be paid to you within four (4) weeks of the termination date, will be inclusive of any termination or severance pay owing to you under applicable employment standards legislation, and will be subject to statutory withholdings and other regular payroll deductions. You will be entitled to the pay, if any, accrued and owing under this Agreement up to the date of termination of your employment. In the event you trigger termination under the Change of Control/Good Reason terms above or are entitled to the termination provisions above as a result of the termination of your employment without cause, you will not be eligible for any payment pursuant to the termination sections below.

Termination:

N. Resignation. If for any reason you should wish to leave the Company, you will provide the Company with three (3) months' prior written notice of your intention (the "**Resignation Period**"). You agree that in order to protect the Company's interests, the Company may, in its sole and unfettered discretion, waive the Resignation Period and end your employment immediately by delivering to you a written notice promptly followed by payment of the Base Salary due to you during the remainder of the Resignation Period and any pay accrued and owing under this Agreement up to the date of termination of your employment.

O. Termination for Cause. The Company may terminate your employment at any time for cause, effective upon delivery by the Company to you of a written notice of termination of your employment for cause. You will not be entitled to receive any further pay or compensation (except for pay, if any, accrued and owing under this Agreement up to the date of termination of your employment), severance pay, notice, payment in lieu of notice, benefits or damages of any kind, and for clarity, without limiting the foregoing, you will not be entitled to any bonus or pro rata bonus payment that has not already been awarded by the Company.

P. Termination Without Cause. The Company may terminate your employment without cause at any time upon providing you working notice of termination, or a lump sum payment of Base Salary in lieu of said notice, or an equivalent combination of working notice and a lump sum payment of Base Salary in lieu of notice, in the amount of twelve (12) months plus one (1) additional month for every one (1) year of consecutive service with the Company including service prior to the Effective Date, up to a combined maximum of eighteen (18) months (the "**Payment Period**").

In the event the Company provides you with any Base Salary in lieu of notice:

(i) subject to the insurer's terms of coverage, the Company will arrange for you to continue to receive group benefits insurance coverage up to the earlier of (I) the end of the Payment Period, or (II) the date you commence full-time employment (in the event the insurer does not continue coverage, the Company will pay you an amount equivalent to the cost of the monthly premiums the Company would have paid on your behalf for the group benefits insurance coverage that are terminated);

(ii) the Company will pay you an Average Bonus pro-rated for the period of the partial bonus year you actually worked immediately prior to the termination of your employment, less statutory and other applicable deductions as required, payable within four (4) weeks of the termination date, provided that if a bonus has not yet been determined for the preceding completed calendar year, the Company will first make that determination in the ordinary course using relevant criteria in a manner consistent with prior practice so that the Average Bonus can then be determined and paid in accordance with this provision;

(iii) the Company will pay you the RRSP Contributions it would have paid on your behalf for the balance of the Payment Period; and

(iv) notwithstanding any provision in this Agreement or in the Stock Option Plans to the contrary, the Company will extend the vesting and exercise rights of your vested and unvested stock options and other deferred compensation as follows:

(I) for stock options granted under the Current SOP and any prior stock option plan, the stock options will continue vesting until the end of the Payment Period, at which time all unvested options will be null and void, and all vested stock options will be exercisable until the earlier of the original expiry date of the options and the date that is three (3) months following the end of the Payment Period; and

(II) for stock options and other deferred compensation granted under the 2014 EIP and any subsequent incentive compensation plan, the stock options and other deferred compensation will continue to vest for a period of three (3) months after the date your employment terminates and all vested stock options and other deferred compensation will be exercisable until the earlier of the original expiry day of the stock options and deferred compensation and the date that is six (6) months after the date your employment terminates.

Any payment in lieu of notice provided to you will be inclusive of any termination or severance pay owing to you under applicable employment standards legislation and subject to statutory withholdings and other regular payroll deductions. You will not be entitled to receive any further pay or compensation except (i) as expressly set out in this Agreement, and (ii) the pay, if any, accrued and owing under this Agreement up to the date of termination of your employment.

No Implied Entitlement. Other than as expressly provided herein, you will not be entitled to receive any further pay or compensation, severance pay, notice, payment in lieu of notice, incentives, bonuses, benefits or damages of any kind.

Continued Effect. Notwithstanding any changes in the terms and conditions of your employment which may occur in the future, including any changes in position, duties or compensation, the termination provisions in this Agreement will continue to be in effect for the duration of your employment with the Company unless otherwise amended in writing and signed by the Company.

Authorization to Deduct Debts. If, on the date you leave employment, you owe the Company any money, you hereby authorize the Company to deduct any such debt from your final pay or any other payment due to you to the extent permitted by the *Employment Standards Act* if applicable. Any remaining debt will be immediately payable to the Company and you agree to satisfy such debt within 14 days of any demand for repayment.

Dispute Resolution. In the event of a dispute arising out of or in connection with this Agreement, or in respect of any legal relationship associated with it or from it, which does not involve the Company seeking a court injunction or other injunctive or equitable relief to protect its business, confidential information or intellectual property, or enforce the covenants hereunder, that dispute will be resolved confidentially as follows:

a. *Amicable Negotiation* – The parties agree that, both during and after the performance of their responsibilities under this Agreement, each of them will make *bona fide* efforts to resolve any disputes arising between them by amicable and expeditious negotiations.

b. *Mediation* – If the parties are unable to negotiate resolution of a dispute, either party may with the agreement of the other party refer the dispute to mediation by providing written notice to the other party. If the parties cannot agree on a mediator within fifteen (15) days of receipt of the notice to mediate, then either party may make application to the British Columbia Arbitration and Mediation Society to have one appointed. The mediation will be held in Vancouver, BC, in accordance with the British Columbia International Commercial Arbitration Centre's (the "**BCICAC**") Commercial Mediation Rules, and each party will bear its own costs, including one-half share of the mediator's fees.

c. *Arbitration* – If, after mediation, the parties have been unable to resolve a dispute or, at any time, if mediation is not undertaken, either party may refer the dispute for final and binding arbitration by providing written notice to the other party. If the parties cannot agree on an arbitrator within fifteen (15) days of receipt of the notice to arbitrate, then either party may make application to the British Columbia Arbitration and Mediation Society to appoint one. The arbitration will be held in Vancouver, BC, in accordance with the BCICAC's Shorter Rules for Domestic Commercial Arbitration. Each party will bear its own costs, including one-half share of the arbitrator's fees, provided that the arbitrator will have discretion to award costs against either party.

Legal Counsel. You have been advised by the Company to retain independent legal advice with respect to this offer of employment.

Currency. Except as otherwise specifically indicated, all monetary amounts referenced herein are in Canadian dollars.

Severability. If any part, article, section, clause, paragraph or subparagraph of this Agreement is held to be indefinite, invalid, illegal or otherwise voidable or

unenforceable for any reason, the entire Agreement will not fail on the account thereof and the validity, legality and enforceability of the remaining provisions will in no way be affected or impaired thereby.

Entire Understanding. We also confirm that this Agreement and the attached Non-Disclosure, Non-Solicitation and Non-Competition Agreement set forth our entire understanding of the terms of your employment with the Company, and cancels and supersedes all previous invitations, proposals, letters, correspondence, negotiations, promises, agreements (including your attached former employment agreement), covenants, conditions, representations and warranties with respect to the subject matter of this Agreement. Any modifications to these employment terms must be made in writing and signed by both you and the Company.

Governing Law. This Agreement and all matters arising hereunder will be governed by and construed in accordance with the laws of the Province of British Columbia.

If you have any questions or concerns regarding the above, please do not hesitate to contact me.

To accept this Agreement on the terms set out herein, please sign where indicated below, and return a signed copy of this Agreement along with a signed copy of the Employee Non-Disclosure, Non-Competition and Non-Solicitation Agreement to me.

Yours sincerely,

XENON PHARMACEUTICALS INC.

/s/ Karen Corraini

Name: Karen Corraini

Title: General Counsel and Corporate Secretary

Attachments:

1) Your former Employee Agreement
2) Xenon Employee Non-Disclosure, Non-Solicitation and Non-Competition Agreement
3) Current Amended and Restated Stock Option Plan
4) 2014 Equity Incentive Plan

I hereby confirm that I have read, understand and voluntarily accept the terms of this Agreement:

/s/ Simon N. Pimstone	October 3, 2014
Simon N. Pimstone	**Date**

SCHEDULE A

Disclosure of Volunteer, Board and Other External Commitments

Position	Organization	Length of Appointment/Engagement
Director	EupraxiaTherapeutics	Two years
Director	Cyon Therapeutics	One year
Director	Enject Therapeutics	Three years
Ass. Clinical Professor	University of B.C.	To start by end of 2014

XENON

October 3, 2014

Confidential

Via Electronic Mail

Paul Goldberg
c/o Xenon Pharmaceuticals Inc.
3650 Gilmore Way
Burnaby, BC V5G 4W8

Dear Paul,

XENON
PHARMACEUTICALS INC.

3650 Gilmore Way
Burnaby, BC
Canada V5G 4W8

T 604-484-3300
F 604-484-3450

www.xenon-pharma.com

Re: Offer of Continued Employment

We are pleased to offer you continued employment with Xenon Pharmaceuticals Inc. (the "**Company**"), on the terms and conditions herein, and in consideration for the change of control protections provided to you by the Company. This Agreement will replace and supersede your existing employment agreement in its entirety; please read it carefully. If you wish to accept the terms herein, please execute and return this agreement to me today (the "**Effective Date**").

As of the Effective Date, you will continue to be engaged by the Company in the full-time position of Vice-President, Clinical Development.

A. Base Salary. As of the Effective Date, you will continue to earn a base salary of $299,439 per year, less statutory and other applicable deductions as required, for all work and services you perform for the Company (the "**Base Salary**"). The Base Salary is payable semi-monthly in arrears in accordance with the Company's applicable payroll policies.

B. Annual Discretionary Bonus. In addition to your Base Salary, you are eligible to earn an annual discretionary bonus of up to 35% of your Base Salary, less statutory and other applicable deductions as required, for each completed calendar year of service. You will be eligible for this bonus in respect of the full 2014 calendar year without regard to the Effective Date. The payment and amount of the annual bonus is within the sole discretion of the Board of Directors (the "**Board**") and will be evaluated in January of each year in relation to the achievement of corporate and personal objectives. Such objectives will be established annually by the Board in its sole discretion. If you work the entire bonus year, you will be eligible for an annual discretionary bonus determined in the ordinary course using relevant criteria in a manner consistent with prior practice, even if the Company terminates your employment after the bonus year prior to the payment of the annual bonuses.

C. Annual Review. Your compensation package, including your salary and bonus percentage, will continue to be reviewed annually; any adjustment to the same is at the sole discretion of the Company provided that the Base Salary will not be reduced without your consent and subject to Sections L and M of this Agreement.

D. Expense Reimbursement. In accordance with its expense policy as amended from time to time, the Company will reimburse any authorized expenses actually and reasonably incurred in the course of performing your employment

duties. The Company will also provide to you, for the duration of your employment, any necessary work tools, such as a laptop computer and mobile phone. Subject to approval by the Company, you will also be reimbursed for out-of-pocket expenses incurred for attending courses or workshops related to your employment duties.

E. Reporting Structure/Responsibilities. You will report to the CEO. You will continue to perform the responsibilities and duties of your position, and subject to Sections L and M such other responsibilities and duties as may be requested by the CEO from time to time. You will at all times continue to: (i) conform to the reasonable and lawful directions of the Company and the Board; (ii) adhere to all applicable Company policies; (iii) give the Company the full benefit of your knowledge, expertise, skill and ingenuity; (iv) well and faithfully serve the Company; (v) devote your best efforts to furthering the interests of the Company; and (vi) exercise the degree of care, diligence and skill that a prudent executive would exercise in comparable circumstances.

You will not during your employment with the Company, be employed by, or provide products or services of any nature whatsoever to, any other person, company, organization or other entity without prior written permission from the Company. This does not restrict you from performing reasonable volunteer activities; however, you must obtain the consent of the Company if you wish serve on a board of directors or advisory board, or if you perform any paid work or services for another organizations. Schedule A contains a description of all such appointments and positions that you currently occupy, and all paid work and services you currently provide to outside organizations, to which the Company confirms that it has provided, and continues to provide, at its discretion, its permission.

F. Vacation and Sick Days. In accordance with the Company's policies, you will earn twenty (20) days of vacation per calendar year on a pro rata basis, and accrue five (5) sick days per calendar year on a pro rata basis. You must take your vacation within twelve (12) months of it being earned. Unused sick days will not be paid out at the end of the calendar year and may not be carried over.

G. Non-Disclosure, Non-Solicitation & Non-Competition Agreement. As a condition of entering into this agreement, you must enter into the enclosed Employee Non-Disclosure, Non-Solicitation and Non-Competition Agreement. Please note that this agreement also deals with confidentiality and the ownership of intellectual property developments. By entering into this agreement, you are agreeing that compliance with its provisions is reasonable and a necessary requirement in our highly competitive industry, and may be required by our agreements with our suppliers, customers, and distributors.

H. Stock Options. You will be eligible to participate in (i) the Company's Amended and Restated Stock Option Plan (the "**Current SOP**"), a current copy of which is enclosed with this Agreement, and (ii) if implemented, the 2014 Equity Incentive Plan that the Company is planning to adopt in connection with an initial public offering of the Company under the *US Securities Exchange Act* of 1934 (the "**2014 EIP**"), a current copy of which is enclosed with this Agreement, each as amended from time to time (together referred to as the "**Stock Option Plan**"). Nothing in this Agreement will affect in any way the stock options granted to you by the Company to date, all of which will, except as expressly provided in this

Agreement, continue to vest and be exercisable in accordance with the terms of the Company's grant and the applicable stock option plan of the Company (all applicable prior stock option plans, and the Stock Option Plan, are referred to as the "**Stock Option Plans**").

I. Benefits. You will be eligible to continue to participate in the Company's employee group benefit plans as offered to the Company's executives, and as amended, from time to time, subject to the Company's policies, eligibility rules, and the terms established by the service providers, as amended from time to time. You will be eligible to continue to participate in the Company's current Group RRSP Plan, under which the Company will pay you the greater of (i) an amount equal to your annual RRSP contributions or (ii) 5% of your Base Salary, provided that the Company will pay the portion equal to your RRSP annual contribution limit directly to your RRSP account and the balance directly to you, less applicable withholdings and deductions (the "**RRSP Contributions**").

J. Taxes. Any taxes, withholdings and premiums applicable to your employment compensation package with the Company will be deducted and remitted to the appropriate authorities and service providers in accordance with the Company's standard policies and the law.

K. Insurance and Indemnification. As an officer of the Company, you will be covered by its Directors' and Officers' Liability Insurance Policy, subject to the terms of the policy and any amendments made from time to time at the Board's discretion. Your coverage under such insurance policy will continue after your employment ends, in respect of your employment, subject to the terms of the policy.

L. Change of Control. In this Agreement:

a. "**Average Bonus**" means an amount that is (i) the sum of the annual bonus awards (expressed as a percentage of the applicable year's Base Salary) that you earned in each of the three (3) completed calendar years preceding the date your employment with the Company terminates, divided by (ii) three (3), multiplied by (iii) your Base Salary at the time your employment with the Company terminates [for example (15% + 5% + 10%) /3 = 10% of Base Salary].

b. **"Change of Control**" means:

   (i) the acquisition by any person or persons acting jointly or in concert (as determined by the Securities Act) ("**Person**"), whether directly or indirectly, of voting securities of the Company that, together with all other voting securities of the Company held by such Person, constitute in the aggregate more than 50% of all outstanding voting securities of the Company; provided, however, that for purposes of this subsection, the acquisition of additional securities by any one Person, who owns more than 50% of all outstanding voting securities of the Company will not be a Change of Control;

   (ii) an amalgamation, arrangement or other form of business combination of the Company with another corporation that results in the holders of voting securities of that other corporation holding, in the aggregate, more than 50% of all outstanding voting securities of the corporation resulting from the

business combination; provided, however, that for purposes of this subsection, the acquisition of additional securities by any one Person, who owns more than 50% of all outstanding voting securities of the Company will not be a Change of Control; or

(iii) a change in the ownership of a substantial portion of the Company's assets, including the sale, lease, transfer or exchange of a substantial portion of the Company's assets, to another Person, other than in the ordinary course of business of the Company, which occurs on the date that such Person acquires (or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than fifty percent (50%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions; provided, however, that for purposes of this subsection (iii), the following will not constitute a change in the ownership of a substantial portion of the Company's assets: (A) a transfer to a Related Entity, or (B) a transfer of assets by the Company to: (1) a stockholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company's stock, (2) an entity of which the Company has Control, (3) a Person, that owns, directly or indirectly, fifty percent (50%) or more of the all outstanding voting securities of the Company, or (4) an entity of which a Person described in this subsection (iii)(B)(3) has Control. For purposes of this subsection (iii), gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets;

provided, however, that a Change in Control will not be deemed to have occurred if such Change in Control results solely from the issuance, in connection with a *bona fid*e public offering, financing or series of financings by the Company, of voting securities of the Company or any rights to acquire voting securities of the Company which are convertible into voting securities.

Further and for the avoidance of doubt, a transaction will not constitute a Change of Control if: (x) its sole purpose is to change the state or jurisdiction of the Company's incorporation, or (y) its sole purpose is to create a holding company the voting securities of which will be owned in substantially the same proportions by the persons who held the Company's voting securities immediately before such transaction.

c. **"Good Reason**" means any of the following occurring within twelve (12) months after the occurrence of a Change of Control:

(i) any unilateral change or series of adverse changes to your employment responsibilities, reporting relationship or status within the Company, such that immediately after such a change or series of adverse changes to your responsibilities, reporting relationship and status, taken as a whole, and taking into account the size and complexity of the business of the Company at that time, are substantially less than those assigned to you immediately prior to such change or series of adverse changes; or

(ii) a material reduction by the Company in your Base Salary or other compensation as in effect prior to the Change of Control that would constitute a constructive dismissal at common law; or

(iii) the taking of any action by the Company, or the failure by the Company to take any action, that would materially adversely affect your participation in, or materially reduce your aggregate benefits under, the total package of incentive, bonus, compensation, RRSP, life insurance, health, accident disability and other similar plans in which you are participating prior to the action by the Company or the failure by the Company to take any action; or

(iv) the unilateral requirement that you relocate anywhere outside Metro Vancouver (or, if based at the Company's offices in another place, the requirement that you relocate somewhere else) where the new location you are required to report to is either not in Canada or both (i) more than 60 kilometers from your previous work location and (ii) more than 60 kilometers from your primary residence; or

(v) failure or refusal of the Successor Company to offer you terms and conditions of employment, including the provisions of Section M of this Agreement, that are substantially the same as the provisions of this Agreement;

(vi) subject to the terms of this Agreement, any reason which would be considered to amount to constructive dismissal by an arbitrator under the laws applicable in British Columbia; or

(vii) termination of your employment without cause by the Company or a Successor Company,

provided that any change or series of in reporting relationship alone will not constitute good reason.

d. "**Successor Company**" means, in connection with a Change of Control, the surviving or acquiring company or entity.

M. Good Reason in Connection With or Following Change of Control: In the event of Good Reason, where the Good Reason occurs:

a. prior to the Change of Control but is related or connected to the Change of Control; or

b. within twelve (12) months of the date of the Change of Control,

then your employment will end on the date it is terminated by the Company or Successor Company or the date terminated by you for Good Reason, in which case the Company or Successor Company will provide you with the following:

a. twelve (12) months' Base Salary, plus one (1) additional month of Base Salary for every year of consecutive service with the Company and Successor Company including service prior to the Effective Date, up to a combined maximum of eighteen (18) months (the "**Payment Period**");

b. payment of your Average Bonus pro-rated for the period of the bonus year you actually worked, less statutory and other applicable deductions as required, payable within four (4) weeks of the termination date provided that if a bonus has not yet been determined for the preceding completed calendar year, the Company or Successor Company will first make that determination in the ordinary course using relevant criteria in a manner consistent with prior practice so that the Average Bonus can then be determined and paid in accordance with this provision;

c. the RRSP Contributions the Company or Successor Company would have paid on your behalf during the Payment Period and, if unpaid, for the period earned and accrued up to the termination of your employment;

d. notwithstanding any provision in the Stock Option Plans to the contrary:

   (i) immediate vesting of all unvested stock options and other deferred compensation awards already granted to you by the Company or the Successor Company;

   (ii) with respect to stock options granted pursuant to the Current SOP and any prior stock option plan, continued exercise rights up to ninety (90) days after the end of the Payment Period, at which time such rights will be null and void; and

   (iii) with respect to stock options and other deferred compensation granted pursuant to the 2014 EIP and any subsequent deferred compensation plan, continued exercise rights for the longer of the period stipulated in the applicable plan or grant and 6 months from the termination of your employment.

e. subject to the applicable insurer's terms of coverage, the Company or Successor Company will arrange for you to continue to receive group benefits insurance coverage up to the earlier of (i) the end of the Payment Period, or (ii) the date you commence full-time employment. In the event the insurer does not continue coverage, the Company will pay you an amount equivalent to the cost of the monthly premiums the Company would have paid on your behalf for the group benefits insurance coverage that are terminated.

In the case of Good Reason (other than Good Reason under Section L.c.(vii)), you must provide the Company or Successor Company with thirty (30) days' written notice of Good Reason within three (3) months of the occurrence of Good Reason or, where based on a series of changes, within three (3) months from the occurrence of the last change in the series of changes. Where the Good Reason is based in whole or in part on a series of changes, the notice period that is based on three (3) months from the occurrence of Good Reason will commence on the occurrence of the last change in the series. Within thirty (30) days of receipt of written notice of Good Reason, the Company or the Successor Company may correct, reverse, rectify or otherwise resolve the change or series of changes that constitute Good Reason, in which case your employment with the Company or Successor Company will continue.

The payments above will be paid to you within four (4) weeks of the termination date, will be inclusive of any termination or severance pay owing to you under applicable employment standards legislation, and will be subject to statutory withholdings and other regular payroll deductions. You will be entitled to the pay, if any, accrued and owing under this Agreement up to the date of termination of your employment. In the event you trigger termination under the Change of Control/Good Reason terms above or are entitled to the termination provisions above as a result of the termination of your employment without cause, you will not be eligible for any payment pursuant to the termination sections below.

Termination:

N. Resignation. If for any reason you should wish to leave the Company, you will provide the Company with three (3) months' prior written notice of your intention (the "**Resignation Period**"). You agree that in order to protect the Company's interests, the Company may, in its sole and unfettered discretion, waive the Resignation Period and end your employment immediately by delivering to you a written notice promptly followed by payment of the Base Salary due to you during the remainder of the Resignation Period and any pay accrued and owing under this Agreement up to the date of termination of your employment.

O. Termination for Cause. The Company may terminate your employment at any time for cause, effective upon delivery by the Company to you of a written notice of termination of your employment for cause. You will not be entitled to receive any further pay or compensation (except for pay, if any, accrued and owing under this Agreement up to the date of termination of your employment), severance pay, notice, payment in lieu of notice, benefits or damages of any kind, and for clarity, without limiting the foregoing, you will not be entitled to any bonus or pro rata bonus payment that has not already been awarded by the Company.

P. Termination Without Cause. The Company may terminate your employment without cause at any time upon providing you working notice of termination, or a lump sum payment of Base Salary in lieu of said notice, or an equivalent combination of working notice and a lump sum payment of Base Salary in lieu of notice, in the amount of twelve (12) months plus one (1) additional month for every one (1) year of consecutive service with the Company including service prior to the Effective Date, up to a combined maximum of eighteen (18) months (the "**Payment Period**").

In the event the Company provides you with any Base Salary in lieu of notice:

(i) subject to the insurer's terms of coverage, the Company will arrange for you to continue to receive group benefits insurance coverage up to the earlier of (I) the end of the Payment Period, or (II) the date you commence full-time employment (in the event the insurer does not continue coverage, the Company will pay you an amount equivalent to the cost of the monthly premiums the Company would have paid on your behalf for the group benefits insurance coverage that are terminated);

(ii) the Company will pay you an Average Bonus pro-rated for the period of the partial bonus year you actually worked immediately prior to the termination of your employment, less statutory and other applicable deductions as required, payable within four (4) weeks of the termination date, provided that if a bonus has not yet been determined for the preceding completed calendar year, the Company will first make that determination in the ordinary course using relevant criteria in a manner consistent with prior practice so that the Average Bonus can then be determined and paid in accordance with this provision;

(iii) the Company will pay you the RRSP Contributions it would have paid on your behalf for the balance of the Payment Period; and

(iv) notwithstanding any provision in this Agreement or in the Stock Option Plans to the contrary, the Company will extend the vesting and exercise rights of your vested and unvested stock options and other deferred compensation as follows:

(I) for stock options granted under the Current SOP and any prior stock option plan, the stock options will continue vesting until the end of the Payment Period, at which time all unvested options will be null and void, and all vested stock options will be exercisable until the earlier of the original expiry date of the options and the date that is three (3) months following the end of the Payment Period; and

(II) for stock options and other deferred compensation granted under the 2014 EIP and any subsequent incentive compensation plan, the stock options and other deferred compensation will continue to vest for a period of three (3) months after the date your employment terminates and all vested stock options and other deferred compensation will be exercisable until the earlier of the original expiry day of the stock options and deferred compensation and the date that is six (6) months after the date your employment terminates.

Any payment in lieu of notice provided to you will be inclusive of any termination or severance pay owing to you under applicable employment standards legislation and subject to statutory withholdings and other regular payroll deductions. You will not be entitled to receive any further pay or compensation except (i) as expressly set out in this Agreement, and (ii) the pay, if any, accrued and owing under this Agreement up to the date of termination of your employment.

No Implied Entitlement. Other than as expressly provided herein, you will not be entitled to receive any further pay or compensation, severance pay, notice, payment in lieu of notice, incentives, bonuses, benefits or damages of any kind.

Continued Effect. Notwithstanding any changes in the terms and conditions of your employment which may occur in the future, including any changes in position, duties or compensation, the termination provisions in this Agreement will continue to be in effect for the duration of your employment with the Company unless otherwise amended in writing and signed by the Company.

Authorization to Deduct Debts. If, on the date you leave employment, you owe the Company any money, you hereby authorize the Company to deduct any such debt from your final pay or any other payment due to you to the extent permitted by the *Employment Standards Act* if applicable. Any remaining debt will be immediately payable to the Company and you agree to satisfy such debt within 14 days of any demand for repayment.

Dispute Resolution. In the event of a dispute arising out of or in connection with this Agreement, or in respect of any legal relationship associated with it or from it, which does not involve the Company seeking a court injunction or other injunctive or equitable relief to protect its business, confidential information or intellectual property, or enforce the covenants hereunder, that dispute will be resolved confidentially as follows:

a. *Amicable Negotiation* – The parties agree that, both during and after the performance of their responsibilities under this Agreement, each of them will make *bona fide* efforts to resolve any disputes arising between them by amicable and expeditious negotiations.

b. *Mediation* – If the parties are unable to negotiate resolution of a dispute, either party may with the agreement of the other party refer the dispute to mediation by providing written notice to the other party. If the parties cannot agree on a mediator within fifteen (15) days of receipt of the notice to mediate, then either party may make application to the British Columbia Arbitration and Mediation Society to have one appointed. The mediation will be held in Vancouver, BC, in accordance with the British Columbia International Commercial Arbitration Centre's (the "**BCICAC**") Commercial Mediation Rules, and each party will bear its own costs, including one-half share of the mediator's fees.

c. *Arbitration* – If, after mediation, the parties have been unable to resolve a dispute or, at any time, if mediation is not undertaken, either party may refer the dispute for final and binding arbitration by providing written notice to the other party. If the parties cannot agree on an arbitrator within fifteen (15) days of receipt of the notice to arbitrate, then either party may make application to the British Columbia Arbitration and Mediation Society to appoint one. The arbitration will be held in Vancouver, BC, in accordance with the BCICAC's Shorter Rules for Domestic Commercial Arbitration. Each party will bear its own costs, including one-half share of the arbitrator's fees, provided that the arbitrator will have discretion to award costs against either party.

Legal Counsel. You have been advised by the Company to retain independent legal advice with respect to this offer of employment.

Currency. Except as otherwise specifically indicated, all monetary amounts referenced herein are in Canadian dollars.

Severability. If any part, article, section, clause, paragraph or subparagraph of this Agreement is held to be indefinite, invalid, illegal or otherwise voidable or

unenforceable for any reason, the entire Agreement will not fail on the account thereof and the validity, legality and enforceability of the remaining provisions will in no way be affected or impaired thereby.

Entire Understanding. We also confirm that this Agreement and the attached Non-Disclosure, Non-Solicitation and Non-Competition Agreement set forth our entire understanding of the terms of your employment with the Company, and cancels and supersedes all previous invitations, proposals, letters, correspondence, negotiations, promises, agreements (including your attached former employment agreement), covenants, conditions, representations and warranties with respect to the subject matter of this Agreement. Any modifications to these employment terms must be made in writing and signed by both you and the Company.

Governing Law. This Agreement and all matters arising hereunder will be governed by and construed in accordance with the laws of the Province of British Columbia.

If you have any questions or concerns regarding the above, please do not hesitate to contact me.

To accept this Agreement on the terms set out herein, please sign where indicated below, and return a signed copy of this Agreement along with a signed copy of the Employee Non-Disclosure, Non-Competition and Non-Solicitation Agreement to me.

Yours sincerely,

XENON PHARMACEUTICALS INC.

/s/ Simon N. Pimstone

Simon N. Pimstone
President & CEO

Attachments:

1) Your former Employee Agreement
2) Xenon Employee Non-Disclosure, Non-Solicitation and Non-Competition Agreement
3) Current Amended and Restated Stock Option Plan
4) 2014 Equity Incentive Plan

I hereby confirm that I have read, understand and voluntarily accept the terms of this Agreement:

/s/ Paul Goldberg	October 3, 2014
Paul Goldberg	**Date**

SCHEDULE A

Disclosure of Volunteer, Board and Other External Commitments

Position	Organization	Length of Appointment/Engagement
Clinical Geneticist	UBC, Department of Medical Genetics	Consulting to patients with genetic Disease, varies in time but currently approx. 1 ½ days per month.

XENON

October 3, 2014

Confidential

Via Electronic Mail

Ian Mortimer
c/o Xenon Pharmaceuticals Inc.
3650 Gilmore Way
Burnaby, BC V5G 4W8

XENON
PHARMACEUTICALS INC.

3650 Gilmore Way
Burnaby, BC
Canada V5G 4W8

T 604-484-3300
F 604-484-3450

www.xenon-pharma.com

Dear Ian,

Re: Offer of Continued Employment

We are pleased to offer you continued employment with Xenon Pharmaceuticals Inc. (the "**Company**"), on the terms and conditions herein, and in consideration for the change of control protections provided to you by the Company. This Agreement will replace and supersede your existing employment agreement in its entirety; please read it carefully. If you wish to accept the terms herein, please execute and return this agreement to me today (the "**Effective Date**").

As of the Effective Date, you will continue to be engaged by the Company in the full-time position of Chief Financial Officer.

A. Base Salary. As of the Effective Date, you will continue to earn a base salary of $311,100 per year, less statutory and other applicable deductions as required, for all work and services you perform for the Company (the "**Base Salary**"). The Base Salary is payable semi-monthly in arrears in accordance with the Company's applicable payroll policies.

B. Annual Discretionary Bonus. In addition to your Base Salary, you are eligible to earn an annual discretionary bonus of up to 40% percent of your Base Salary, less statutory and other applicable deductions as required, for each completed calendar year of service. You will be eligible for this bonus in respect of the full 2014 calendar year without regard to the Effective Date. The payment and amount of the annual bonus is within the sole discretion of the Board of Directors (the "**Board**") and will be evaluated in January of each year in relation to the achievement of corporate and personal objectives. Such objectives will be established annually by the Board in its sole discretion. If you work the entire bonus year, you will be eligible for an annual discretionary bonus determined in the ordinary course using relevant criteria in a manner consistent with prior practice, even if the Company terminates your employment after the bonus year prior to the payment of the annual bonuses.

C. Annual Review. Your compensation package, including your salary and bonus percentage, will continue to be reviewed annually; any adjustment to the same is at the sole discretion of the Company provided that the Base Salary will not be reduced without your consent and subject to Sections L and M of this Agreement.

D. Expense Reimbursement. In accordance with its expense policy as amended from time to time, the Company will reimburse any authorized expenses actually and reasonably incurred in the course of performing your employment

duties. The Company will also provide to you, for the duration of your employment, any necessary work tools, such as a laptop computer and mobile phone. Subject to approval by the Company, you will also be reimbursed for out-of-pocket expenses incurred for attending courses or workshops related to your employment duties.

E. Reporting Structure/Responsibilities. You will report to the CEO. You will continue to perform the responsibilities and duties of your position, and subject to Sections L and M such other responsibilities and duties as may be requested by the CEO from time to time. You will at all times continue to: (i) conform to the reasonable and lawful directions of the Company and the Board; (ii) adhere to all applicable Company policies; (iii) give the Company the full benefit of your knowledge, expertise, skill and ingenuity; (iv) well and faithfully serve the Company; (v) devote your best efforts to furthering the interests of the Company; and (vi) exercise the degree of care, diligence and skill that a prudent executive would exercise in comparable circumstances.

You will not during your employment with the Company, be employed by, or provide products or services of any nature whatsoever to, any other person, company, organization or other entity without prior written permission from the Company. This does not restrict you from performing reasonable volunteer activities; however, you must obtain the consent of the Company if you wish serve on a board of directors or advisory board, or if you perform any paid work or services for another organizations. Schedule A contains a description of all such appointments and positions that you currently occupy, and all paid work and services you currently provide to outside organizations, to which the Company confirms that it has provided, and continues to provide, at its discretion, its permission.

F. Vacation and Sick Days. In accordance with the Company's policies, you will earn twenty (20) days of vacation per calendar year on a pro rata basis, and accrue five (5) sick days per calendar year on a pro rata basis. You must take your vacation within twelve (12) months of it being earned. Unused sick days will not be paid out at the end of the calendar year and may not be carried over.

G. Non-Disclosure, Non-Solicitation & Non-Competition Agreement. As a condition of entering into this agreement, you must enter into the enclosed Employee Non-Disclosure, Non-Solicitation and Non-Competition Agreement. Please note that this agreement also deals with confidentiality and the ownership of intellectual property developments. By entering into this agreement, you are agreeing that compliance with its provisions is reasonable and a necessary requirement in our highly competitive industry, and may be required by our agreements with our suppliers, customers, and distributors.

H. Stock Options. You will be eligible to participate in (i) the Company's Amended and Restated Stock Option Plan (the "**Current SOP**"), a current copy of which is enclosed with this Agreement, and (ii) if implemented, the 2014 Equity Incentive Plan that the Company is planning to adopt in connection with an initial public offering of the Company under the *US Securities Exchange Act* of 1934 (the "**2014 EIP**"), a current copy of which is enclosed with this Agreement, each as amended from time to time (together referred to as the "**Stock Option Plan**"). Nothing in this Agreement will affect in any way the stock options granted to you by the Company to date, all of which will, except as expressly provided in this

Agreement, continue to vest and be exercisable in accordance with the terms of the Company's grant and the applicable stock option plan of the Company (all applicable prior stock option plans, and the Stock Option Plan, are referred to as the "**Stock Option Plans**").

I. Benefits. You will be eligible to continue to participate in the Company's employee group benefit plans as offered to the Company's executives, and as amended, from time to time, subject to the Company's policies, eligibility rules, and the terms established by the service providers, as amended from time to time. You will be eligible to continue to participate in the Company's current Group RRSP Plan, under which the Company will pay you the greater of (i) an amount equal to your annual RRSP contributions or (ii) 5% of your Base Salary, provided that the Company will pay the portion equal to your RRSP annual contribution limit directly to your RRSP account and the balance directly to you, less applicable withholdings and deductions (the "**RRSP Contributions**").

J. Taxes. Any taxes, withholdings and premiums applicable to your employment compensation package with the Company will be deducted and remitted to the appropriate authorities and service providers in accordance with the Company's standard policies and the law.

K. Insurance and Indemnification. As an officer of the Company, you will be covered by its Directors' and Officers' Liability Insurance Policy, subject to the terms of the policy and any amendments made from time to time at the Board's discretion. Your coverage under such insurance policy will continue after your employment ends, in respect of your employment, subject to the terms of the policy.

L. Change of Control. In this Agreement:

a. "**Average Bonus**" means an amount that is (i) the sum of the annual bonus awards (expressed as a percentage of the applicable year's Base Salary) that you earned in each of the three (3) completed calendar years preceding the date your employment with the Company terminates, divided by (ii) three (3), multiplied by (iii) your Base Salary at the time your employment with the Company terminates [for example (15% + 5% + 10%) /3 = 10% of Base Salary].

b. **"Change of Control**" means:

   (i) the acquisition by any person or persons acting jointly or in concert (as determined by the Securities Act) ("**Person**"), whether directly or indirectly, of voting securities of the Company that, together with all other voting securities of the Company held by such Person, constitute in the aggregate more than 50% of all outstanding voting securities of the Company; provided, however, that for purposes of this subsection, the acquisition of additional securities by any one Person, who owns more than 50% of all outstanding voting securities of the Company will not be a Change of Control;

   (ii) an amalgamation, arrangement or other form of business combination of the Company with another corporation that results in the holders of voting securities of that other corporation holding, in the aggregate, more than 50% of all outstanding voting securities of the corporation resulting from the

business combination; provided, however, that for purposes of this subsection, the acquisition of additional securities by any one Person, who owns more than 50% of all outstanding voting securities of the Company will not be a Change of Control; or

(iii) a change in the ownership of a substantial portion of the Company's assets, including the sale, lease, transfer or exchange of a substantial portion of the Company's assets, to another Person, other than in the ordinary course of business of the Company, which occurs on the date that such Person acquires (or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than fifty percent (50%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions; provided, however, that for purposes of this subsection (iii), the following will not constitute a change in the ownership of a substantial portion of the Company's assets: (A) a transfer to a Related Entity, or (B) a transfer of assets by the Company to: (1) a stockholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company's stock, (2) an entity of which the Company has Control, (3) a Person, that owns, directly or indirectly, fifty percent (50%) or more of the all outstanding voting securities of the Company, or (4) an entity of which a Person described in this subsection (iii)(B)(3) has Control. For purposes of this subsection (iii), gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets;

provided, however, that a Change in Control will not be deemed to have occurred if such Change in Control results solely from the issuance, in connection with a *bona fid*e public offering, financing or series of financings by the Company, of voting securities of the Company or any rights to acquire voting securities of the Company which are convertible into voting securities.

Further and for the avoidance of doubt, a transaction will not constitute a Change of Control if: (x) its sole purpose is to change the state or jurisdiction of the Company's incorporation, or (y) its sole purpose is to create a holding company the voting securities of which will be owned in substantially the same proportions by the persons who held the Company's voting securities immediately before such transaction.

c. **"Good Reason**" means any of the following occurring within twelve (12) months after the occurrence of a Change of Control:

(i) any unilateral change or series of adverse changes to your employment responsibilities, reporting relationship or status within the Company, such that immediately after such a change or series of adverse changes to your responsibilities, reporting relationship and status, taken as a whole, and taking into account the size and complexity of the business of the Company at that time, are substantially less than those assigned to you immediately prior to such change or series of adverse changes; or

(ii) a material reduction by the Company in your Base Salary or other compensation as in effect prior to the Change of Control that would constitute a constructive dismissal at common law; or

(iii) the taking of any action by the Company, or the failure by the Company to take any action, that would materially adversely affect your participation in, or materially reduce your aggregate benefits under, the total package of incentive, bonus, compensation, RRSP, life insurance, health, accident disability and other similar plans in which you are participating prior to the action by the Company or the failure by the Company to take any action; or

(iv) the unilateral requirement that you relocate anywhere outside Metro Vancouver (or, if based at the Company's offices in another place, the requirement that you relocate somewhere else) where the new location you are required to report to is either not in Canada or both (i) more than 60 kilometers from your previous work location and (ii) more than 60 kilometers from your primary residence; or

(v) failure or refusal of the Successor Company to offer you terms and conditions of employment, including the provisions of Section M of this Agreement, that are substantially the same as the provisions of this Agreement;

(vi) subject to the terms of this Agreement, any reason which would be considered to amount to constructive dismissal by an arbitrator under the laws applicable in British Columbia; or

(vii) termination of your employment without cause by the Company or a Successor Company,

provided that any change or series of in reporting relationship alone will not constitute good reason.

d. "**Successor Company**" means, in connection with a Change of Control, the surviving or acquiring company or entity.

M. Good Reason in Connection With or Following Change of Control: In the event of Good Reason, where the Good Reason occurs:

a. prior to the Change of Control but is related or connected to the Change of Control; or

b. within twelve (12) months of the date of the Change of Control,

then your employment will end on the date it is terminated by the Company or Successor Company or the date terminated by you for Good Reason, in which case the Company or Successor Company will provide you with the following:

a. twelve (12) months' Base Salary, plus one (1) additional month of Base Salary for every year of consecutive service with the Company and Successor Company including service prior to the Effective Date, up to a combined maximum of eighteen (18) months (the "**Payment Period**");

b. payment of your Average Bonus pro-rated for the period of the bonus year you actually worked, less statutory and other applicable deductions as required, payable within four (4) weeks of the termination date provided that if a bonus has not yet been determined for the preceding completed calendar year, the Company or Successor Company will first make that determination in the ordinary course using relevant criteria in a manner consistent with prior practice so that the Average Bonus can then be determined and paid in accordance with this provision;

c. the RRSP Contributions the Company or Successor Company would have paid on your behalf during the Payment Period and, if unpaid, for the period earned and accrued up to the termination of your employment;

d. notwithstanding any provision in the Stock Option Plans to the contrary:

   (i) immediate vesting of all unvested stock options and other deferred compensation awards already granted to you by the Company or the Successor Company;

   (ii) with respect to stock options granted pursuant to the Current SOP and any prior stock option plan, continued exercise rights up to ninety (90) days after the end of the Payment Period, at which time such rights will be null and void; and

   (iii) with respect to stock options and other deferred compensation granted pursuant to the 2014 EIP and any subsequent deferred compensation plan, continued exercise rights for the longer of the period stipulated in the applicable plan or grant and 6 months from the termination of your employment.

e. subject to the applicable insurer's terms of coverage, the Company or Successor Company will arrange for you to continue to receive group benefits insurance coverage up to the earlier of (i) the end of the Payment Period, or (ii) the date you commence full-time employment. In the event the insurer does not continue coverage, the Company will pay you an amount equivalent to the cost of the monthly premiums the Company would have paid on your behalf for the group benefits insurance coverage that are terminated.

In the case of Good Reason (other than Good Reason under Section L.c.(vii)), you must provide the Company or Successor Company with thirty (30) days' written notice of Good Reason within three (3) months of the occurrence of Good Reason or, where based on a series of changes, within three (3) months from the occurrence of the last change in the series of changes. Where the Good Reason is based in whole or in part on a series of changes, the notice period that is based on three (3) months from the occurrence of Good Reason will commence on the occurrence of the last change in the series. Within thirty (30) days of receipt of written notice of Good Reason, the Company or the Successor Company may correct, reverse, rectify or otherwise resolve the change or series of changes that constitute Good Reason, in which case your employment with the Company or Successor Company will continue.

The payments above will be paid to you within four (4) weeks of the termination date, will be inclusive of any termination or severance pay owing to you under applicable employment standards legislation, and will be subject to statutory withholdings and other regular payroll deductions. You will be entitled to the pay, if any, accrued and owing under this Agreement up to the date of termination of your employment. In the event you trigger termination under the Change of Control/Good Reason terms above or are entitled to the termination provisions above as a result of the termination of your employment without cause, you will not be eligible for any payment pursuant to the termination sections below.

Termination:

N. Resignation. If for any reason you should wish to leave the Company, you will provide the Company with three (3) months' prior written notice of your intention (the "**Resignation Period**"). You agree that in order to protect the Company's interests, the Company may, in its sole and unfettered discretion, waive the Resignation Period and end your employment immediately by delivering to you a written notice promptly followed by payment of the Base Salary due to you during the remainder of the Resignation Period and any pay accrued and owing under this Agreement up to the date of termination of your employment.

O. Termination for Cause. The Company may terminate your employment at any time for cause, effective upon delivery by the Company to you of a written notice of termination of your employment for cause. You will not be entitled to receive any further pay or compensation (except for pay, if any, accrued and owing under this Agreement up to the date of termination of your employment), severance pay, notice, payment in lieu of notice, benefits or damages of any kind, and for clarity, without limiting the foregoing, you will not be entitled to any bonus or pro rata bonus payment that has not already been awarded by the Company.

P. Termination Without Cause. The Company may terminate your employment without cause at any time upon providing you working notice of termination, or a lump sum payment of Base Salary in lieu of said notice, or an equivalent combination of working notice and a lump sum payment of Base Salary in lieu of notice, in the amount of twelve (12) months plus one (1) additional month for every one (1) year of consecutive service with the Company including service prior to the Effective Date, up to a combined maximum of eighteen (18) months (the "**Payment Period**").

In the event the Company provides you with any Base Salary in lieu of notice:

(i) subject to the insurer's terms of coverage, the Company will arrange for you to continue to receive group benefits insurance coverage up to the earlier of (I) the end of the Payment Period, or (II) the date you commence full-time employment (in the event the insurer does not continue coverage, the Company will pay you an amount equivalent to the cost of the monthly premiums the Company would have paid on your behalf for the group benefits insurance coverage that are terminated);

(ii) the Company will pay you an Average Bonus pro-rated for the period of the partial bonus year you actually worked immediately prior to the termination of your employment, less statutory and other applicable deductions as required, payable within four (4) weeks of the termination date, provided that if a bonus has not yet been determined for the preceding completed calendar year, the Company will first make that determination in the ordinary course using relevant criteria in a manner consistent with prior practice so that the Average Bonus can then be determined and paid in accordance with this provision;

(iii) the Company will pay you the RRSP Contributions it would have paid on your behalf for the balance of the Payment Period; and

(iv) notwithstanding any provision in this Agreement or in the Stock Option Plans to the contrary, the Company will extend the vesting and exercise rights of your vested and unvested stock options and other deferred compensation as follows:

(I) for stock options granted under the Current SOP and any prior stock option plan, the stock options will continue vesting until the end of the Payment Period, at which time all unvested options will be null and void, and all vested stock options will be exercisable until the earlier of the original expiry date of the options and the date that is three (3) months following the end of the Payment Period; and

(II) for stock options and other deferred compensation granted under the 2014 EIP and any subsequent incentive compensation plan, the stock options and other deferred compensation will continue to vest for a period of three (3) months after the date your employment terminates and all vested stock options and other deferred compensation will be exercisable until the earlier of the original expiry day of the stock options and deferred compensation and the date that is six (6) months after the date your employment terminates.

Any payment in lieu of notice provided to you will be inclusive of any termination or severance pay owing to you under applicable employment standards legislation and subject to statutory withholdings and other regular payroll deductions. You will not be entitled to receive any further pay or compensation except (i) as expressly set out in this Agreement, and (ii) the pay, if any, accrued and owing under this Agreement up to the date of termination of your employment.

No Implied Entitlement. Other than as expressly provided herein, you will not be entitled to receive any further pay or compensation, severance pay, notice, payment in lieu of notice, incentives, bonuses, benefits or damages of any kind.

Continued Effect. Notwithstanding any changes in the terms and conditions of your employment which may occur in the future, including any changes in position, duties or compensation, the termination provisions in this Agreement will continue to be in effect for the duration of your employment with the Company unless otherwise amended in writing and signed by the Company.

Authorization to Deduct Debts. If, on the date you leave employment, you owe the Company any money, you hereby authorize the Company to deduct any such debt from your final pay or any other payment due to you to the extent permitted by the *Employment Standards Act* if applicable. Any remaining debt will be immediately payable to the Company and you agree to satisfy such debt within 14 days of any demand for repayment.

Dispute Resolution. In the event of a dispute arising out of or in connection with this Agreement, or in respect of any legal relationship associated with it or from it, which does not involve the Company seeking a court injunction or other injunctive or equitable relief to protect its business, confidential information or intellectual property, or enforce the covenants hereunder, that dispute will be resolved confidentially as follows:

a. *Amicable Negotiation* – The parties agree that, both during and after the performance of their responsibilities under this Agreement, each of them will make *bona fide* efforts to resolve any disputes arising between them by amicable and expeditious negotiations.

b. *Mediation* – If the parties are unable to negotiate resolution of a dispute, either party may with the agreement of the other party refer the dispute to mediation by providing written notice to the other party. If the parties cannot agree on a mediator within fifteen (15) days of receipt of the notice to mediate, then either party may make application to the British Columbia Arbitration and Mediation Society to have one appointed. The mediation will be held in Vancouver, BC, in accordance with the British Columbia International Commercial Arbitration Centre's (the "**BCICAC**") Commercial Mediation Rules, and each party will bear its own costs, including one-half share of the mediator's fees.

c. *Arbitration* – If, after mediation, the parties have been unable to resolve a dispute or, at any time, if mediation is not undertaken, either party may refer the dispute for final and binding arbitration by providing written notice to the other party. If the parties cannot agree on an arbitrator within fifteen (15) days of receipt of the notice to arbitrate, then either party may make application to the British Columbia Arbitration and Mediation Society to appoint one. The arbitration will be held in Vancouver, BC, in accordance with the BCICAC's Shorter Rules for Domestic Commercial Arbitration. Each party will bear its own costs, including one-half share of the arbitrator's fees, provided that the arbitrator will have discretion to award costs against either party.

Legal Counsel. You have been advised by the Company to retain independent legal advice with respect to this offer of employment.

Currency. Except as otherwise specifically indicated, all monetary amounts referenced herein are in Canadian dollars.

Severability. If any part, article, section, clause, paragraph or subparagraph of this Agreement is held to be indefinite, invalid, illegal or otherwise voidable or

unenforceable for any reason, the entire Agreement will not fail on the account thereof and the validity, legality and enforceability of the remaining provisions will in no way be affected or impaired thereby.

Entire Understanding. We also confirm that this Agreement and the attached Non-Disclosure, Non-Solicitation and Non-Competition Agreement set forth our entire understanding of the terms of your employment with the Company, and cancels and supersedes all previous invitations, proposals, letters, correspondence, negotiations, promises, agreements (including your attached former employment agreement), covenants, conditions, representations and warranties with respect to the subject matter of this Agreement. Any modifications to these employment terms must be made in writing and signed by both you and the Company.

Governing Law. This Agreement and all matters arising hereunder will be governed by and construed in accordance with the laws of the Province of British Columbia.

If you have any questions or concerns regarding the above, please do not hesitate to contact me.

To accept this Agreement on the terms set out herein, please sign where indicated below, and return a signed copy of this Agreement along with a signed copy of the Employee Non-Disclosure, Non-Competition and Non-Solicitation Agreement to me.

Yours sincerely,

XENON PHARMACEUTICALS INC.

/s/ Simon N. Pimstone

Simon N. Pimstone
President & CEO

Attachments:

1) Your former Employee Agreement
2) Xenon Employee Non-Disclosure, Non-Solicitation and Non-Competition Agreement
3) Current Amended and Restated Stock Option Plan
4) 2014 Equity Incentive Plan

I hereby confirm that I have read, understand and voluntarily accept the terms of this Agreement:

/s/ Ian Mortimer	October 3, 2014
Ian Mortimer	**Date**

SCHEDULE A

Disclosure of Volunteer, Board and Other External Commitments

Position	Organization	Length of Appointment/Engagement
Treasurer / Board Member	Deep Cove Parent Participation Preschool Society	Since 2012; elected on a 1 year basis (June 2014-June 2015; can be extended at June 2015 AGM)
Soccer Coach	North Vancouver Football Club	Year to year

XENON

October 3, 2014

Confidential

Via Electronic Mail

Karen Corraini
c/o Xenon Pharmaceuticals Inc.
3650 Gilmore Way
Burnaby, BC V5G 4W8

XENON
PHARMACEUTICALS INC.

3650 Gilmore Way
Burnaby, BC
Canada V5G 4W8

T 604-484-3300
F 604-484-3450

www.xenon-pharma.com

Dear Karen,

Re: Offer of Continued Employment

We are pleased to offer you continued employment with Xenon Pharmaceuticals Inc. (the "**Company**"), on the terms and conditions herein, and in consideration for the change of control protections provided to you by the Company. This Agreement will replace and supersede your existing employment agreement in its entirety; please read it carefully. If you wish to accept the terms herein, please execute and return this agreement to me today (the "**Effective Date**").

As of the Effective Date, you will continue to be engaged by the Company in the full-time position of General Counsel & Corporate Secretary.

A. Base Salary. As of the Effective Date, you will continue to earn a base salary of $261,353 per year, less statutory and other applicable deductions as required, for all work and services you perform for the Company (the "**Base Salary**"). The Base Salary is payable semi-monthly in arrears in accordance with the Company's applicable payroll policies.

B. Annual Discretionary Bonus. In addition to your Base Salary, you are eligible to earn an annual discretionary bonus of up to 35% percent of your Base Salary, less statutory and other applicable deductions as required, for each completed calendar year of service. You will be eligible for this bonus in respect of the full 2014 calendar year without regard to the Effective Date. The payment and amount of the annual bonus is within the sole discretion of the Board of Directors (the "**Board**") and will be evaluated in January of each year in relation to the achievement of corporate and personal objectives. Such objectives will be established annually by the Board in its sole discretion. If you work the entire bonus year, you will be eligible for an annual discretionary bonus determined in the ordinary course using relevant criteria in a manner consistent with prior practice, even if the Company terminates your employment after the bonus year prior to the payment of the annual bonuses.

C. Annual Review. Your compensation package, including your salary and bonus percentage, will continue to be reviewed annually; any adjustment to the same is at the sole discretion of the Company provided that the Base Salary will not be reduced without your consent and subject to Sections L and M of this Agreement.

D. Expense Reimbursement. In accordance with its expense policy as amended from time to time, the Company will reimburse any authorized expenses actually and reasonably incurred in the course of performing your employment

duties. The Company will also provide to you, for the duration of your employment, any necessary work tools, such as a laptop computer and mobile phone. Subject to approval by the Company, you will also be reimbursed for out-of-pocket expenses incurred for attending courses or workshops related to your employment duties.

E. Reporting Structure/Responsibilities. You will report to the CEO. You will continue to perform the responsibilities and duties of your position, and subject to Sections L and M such other responsibilities and duties as may be requested by the CEO from time to time. You will at all times continue to: (i) conform to the reasonable and lawful directions of the Company and the Board; (ii) adhere to all applicable Company policies; (iii) give the Company the full benefit of your knowledge, expertise, skill and ingenuity; (iv) well and faithfully serve the Company; (v) devote your best efforts to furthering the interests of the Company; and (vi) exercise the degree of care, diligence and skill that a prudent executive would exercise in comparable circumstances.

You will not during your employment with the Company, be employed by, or provide products or services of any nature whatsoever to, any other person, company, organization or other entity without prior written permission from the Company. This does not restrict you from performing reasonable volunteer activities; however, you must obtain the consent of the Company if you wish serve on a board of directors or advisory board, or if you perform any paid work or services for another organizations. Schedule A contains a description of all such appointments and positions that you currently occupy, and all paid work and services you currently provide to outside organizations, to which the Company confirms that it has provided, and continues to provide, at its discretion, its permission.

F. Vacation and Sick Days. In accordance with the Company's policies, you will earn twenty (20) days of vacation per calendar year on a pro rata basis, and accrue five (5) sick days per calendar year on a pro rata basis. You must take your vacation within twelve (12) months of it being earned. Unused sick days will not be paid out at the end of the calendar year and may not be carried over.

G. Non-Disclosure, Non-Solicitation & Non-Competition Agreement. As a condition of entering into this agreement, you must enter into the enclosed Employee Non-Disclosure, Non-Solicitation and Non-Competition Agreement. Please note that this agreement also deals with confidentiality and the ownership of intellectual property developments. By entering into this agreement, you are agreeing that compliance with its provisions is reasonable and a necessary requirement in our highly competitive industry, and may be required by our agreements with our suppliers, customers, and distributors.

H. Stock Options. You will be eligible to participate in (i) the Company's Amended and Restated Stock Option Plan (the "**Current SOP**"), a current copy of which is enclosed with this Agreement, and (ii) if implemented, the 2014 Equity Incentive Plan that the Company is planning to adopt in connection with an initial public offering of the Company under the *US Securities Exchange Act* of 1934 (the "**2014 EIP**"), a current copy of which is enclosed with this Agreement, each as amended from time to time (together referred to as the "**Stock Option Plan**"). Nothing in this Agreement will affect in any way the stock options granted to you by the Company to date, all of which will, except as expressly provided in this

Agreement, continue to vest and be exercisable in accordance with the terms of the Company's grant and the applicable stock option plan of the Company (all applicable prior stock option plans, and the Stock Option Plan, are referred to as the "**Stock Option Plans**").

I. Benefits. You will be eligible to continue to participate in the Company's employee group benefit plans as offered to the Company's executives, and as amended, from time to time, subject to the Company's policies, eligibility rules, and the terms established by the service providers, as amended from time to time. You will be eligible to continue to participate in the Company's current Group RRSP Plan, under which the Company will pay you the greater of (i) an amount equal to your annual RRSP contributions or (ii) 5% of your Base Salary, provided that the Company will pay the portion equal to your RRSP annual contribution limit directly to your RRSP account and the balance directly to you, less applicable withholdings and deductions (the "**RRSP Contributions**").

J. Taxes. Any taxes, withholdings and premiums applicable to your employment compensation package with the Company will be deducted and remitted to the appropriate authorities and service providers in accordance with the Company's standard policies and the law.

K. Insurance and Indemnification. As an officer of the Company, you will be covered by its Directors' and Officers' Liability Insurance Policy, subject to the terms of the policy and any amendments made from time to time at the Board's discretion. Your coverage under such insurance policy will continue after your employment ends, in respect of your employment, subject to the terms of the policy.

L. Change of Control. In this Agreement:

a. "**Average Bonus**" means an amount that is (i) the sum of the annual bonus awards (expressed as a percentage of the applicable year's Base Salary) that you earned in each of the three (3) completed calendar years preceding the date your employment with the Company terminates, divided by (ii) three (3), multiplied by (iii) your Base Salary at the time your employment with the Company terminates [for example (15% + 5% + 10%) /3 = 10% of Base Salary].

b. **"Change of Control**" means:

(i) the acquisition by any person or persons acting jointly or in concert (as determined by the Securities Act) ("**Person**"), whether directly or indirectly, of voting securities of the Company that, together with all other voting securities of the Company held by such Person, constitute in the aggregate more than 50% of all outstanding voting securities of the Company; provided, however, that for purposes of this subsection, the acquisition of additional securities by any one Person, who owns more than 50% of all outstanding voting securities of the Company will not be a Change of Control;

(ii) an amalgamation, arrangement or other form of business combination of the Company with another corporation that results in the holders of voting securities of that other corporation holding, in the aggregate, more than 50% of all outstanding voting securities of the corporation resulting from the

business combination; provided, however, that for purposes of this subsection, the acquisition of additional securities by any one Person, who owns more than 50% of all outstanding voting securities of the Company will not be a Change of Control; or

(iii) a change in the ownership of a substantial portion of the Company's assets, including the sale, lease, transfer or exchange of a substantial portion of the Company's assets, to another Person, other than in the ordinary course of business of the Company, which occurs on the date that such Person acquires (or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than fifty percent (50%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions; provided, however, that for purposes of this subsection (iii), the following will not constitute a change in the ownership of a substantial portion of the Company's assets: (A) a transfer to a Related Entity, or (B) a transfer of assets by the Company to: (1) a stockholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company's stock, (2) an entity of which the Company has Control, (3) a Person, that owns, directly or indirectly, fifty percent (50%) or more of the all outstanding voting securities of the Company, or (4) an entity of which a Person described in this subsection (iii)(B)(3) has Control. For purposes of this subsection (iii), gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets;

provided, however, that a Change in Control will not be deemed to have occurred if such Change in Control results solely from the issuance, in connection with a *bona fid*e public offering, financing or series of financings by the Company, of voting securities of the Company or any rights to acquire voting securities of the Company which are convertible into voting securities.

Further and for the avoidance of doubt, a transaction will not constitute a Change of Control if: (x) its sole purpose is to change the state or jurisdiction of the Company's incorporation, or (y) its sole purpose is to create a holding company the voting securities of which will be owned in substantially the same proportions by the persons who held the Company's voting securities immediately before such transaction.

c. **"Good Reason**" means any of the following occurring within twelve (12) months after the occurrence of a Change of Control:

(i) any unilateral change or series of adverse changes to your employment responsibilities, reporting relationship or status within the Company, such that immediately after such a change or series of adverse changes to your responsibilities, reporting relationship and status, taken as a whole, and taking into account the size and complexity of the business of the Company at that time, are substantially less than those assigned to you immediately prior to such change or series of adverse changes; or

(ii) a material reduction by the Company in your Base Salary or other compensation as in effect prior to the Change of Control that would constitute a constructive dismissal at common law; or

(iii) the taking of any action by the Company, or the failure by the Company to take any action, that would materially adversely affect your participation in, or materially reduce your aggregate benefits under, the total package of incentive, bonus, compensation, RRSP, life insurance, health, accident disability and other similar plans in which you are participating prior to the action by the Company or the failure by the Company to take any action; or

(iv) the unilateral requirement that you relocate anywhere outside Metro Vancouver (or, if based at the Company's offices in another place, the requirement that you relocate somewhere else) where the new location you are required to report to is either not in Canada or both (i) more than 60 kilometers from your previous work location and (ii) more than 60 kilometers from your primary residence; or

(v) failure or refusal of the Successor Company to offer you terms and conditions of employment, including the provisions of Section M of this Agreement, that are substantially the same as the provisions of this Agreement;

(vi) subject to the terms of this Agreement, any reason which would be considered to amount to constructive dismissal by an arbitrator under the laws applicable in British Columbia; or

(vii) termination of your employment without cause by the Company or a Successor Company,

provided that any change or series of in reporting relationship alone will not constitute good reason.

d. "**Successor Company**" means, in connection with a Change of Control, the surviving or acquiring company or entity.

M. Good Reason in Connection With or Following Change of Control: In the event of Good Reason, where the Good Reason occurs:

a. prior to the Change of Control but is related or connected to the Change of Control; or

b. within twelve (12) months of the date of the Change of Control,

then your employment will end on the date it is terminated by the Company or Successor Company or the date terminated by you for Good Reason, in which case the Company or Successor Company will provide you with the following:

a. twelve (12) months' Base Salary, plus one (1) additional month of Base Salary for every year of consecutive service with the Company and Successor Company including service prior to the Effective Date, up to a combined maximum of eighteen (18) months (the "**Payment Period**");

b. payment of your Average Bonus pro-rated for the period of the bonus year you actually worked, less statutory and other applicable deductions as required, payable within four (4) weeks of the termination date provided that if a bonus has not yet been determined for the preceding completed calendar year, the Company or Successor Company will first make that determination in the ordinary course using relevant criteria in a manner consistent with prior practice so that the Average Bonus can then be determined and paid in accordance with this provision;

c. the RRSP Contributions the Company or Successor Company would have paid on your behalf during the Payment Period and, if unpaid, for the period earned and accrued up to the termination of your employment;

d. notwithstanding any provision in the Stock Option Plans to the contrary:

   (i) immediate vesting of all unvested stock options and other deferred compensation awards already granted to you by the Company or the Successor Company;

   (ii) with respect to stock options granted pursuant to the Current SOP and any prior stock option plan, continued exercise rights up to ninety (90) days after the end of the Payment Period, at which time such rights will be null and void; and

   (iii) with respect to stock options and other deferred compensation granted pursuant to the 2014 EIP and any subsequent deferred compensation plan, continued exercise rights for the longer of the period stipulated in the applicable plan or grant and 6 months from the termination of your employment.

e. subject to the applicable insurer's terms of coverage, the Company or Successor Company will arrange for you to continue to receive group benefits insurance coverage up to the earlier of (i) the end of the Payment Period, or (ii) the date you commence full-time employment. In the event the insurer does not continue coverage, the Company will pay you an amount equivalent to the cost of the monthly premiums the Company would have paid on your behalf for the group benefits insurance coverage that are terminated.

In the case of Good Reason (other than Good Reason under Section L.c.(vii)), you must provide the Company or Successor Company with thirty (30) days' written notice of Good Reason within three (3) months of the occurrence of Good Reason or, where based on a series of changes, within three (3) months from the occurrence of the last change in the series of changes. Where the Good Reason is based in whole or in part on a series of changes, the notice period that is based on three (3) months from the occurrence of Good Reason will commence on the occurrence of the last change in the series. Within thirty (30) days of receipt of written notice of Good Reason, the Company or the Successor Company may correct, reverse, rectify or otherwise resolve the change or series of changes that constitute Good Reason, in which case your employment with the Company or Successor Company will continue.

The payments above will be paid to you within four (4) weeks of the termination date, will be inclusive of any termination or severance pay owing to you under applicable employment standards legislation, and will be subject to statutory withholdings and other regular payroll deductions. You will be entitled to the pay, if any, accrued and owing under this Agreement up to the date of termination of your employment. In the event you trigger termination under the Change of Control/Good Reason terms above or are entitled to the termination provisions above as a result of the termination of your employment without cause, you will not be eligible for any payment pursuant to the termination sections below.

Termination:

N. Resignation. If for any reason you should wish to leave the Company, you will provide the Company with three (3) months' prior written notice of your intention (the "**Resignation Period**"). You agree that in order to protect the Company's interests, the Company may, in its sole and unfettered discretion, waive the Resignation Period and end your employment immediately by delivering to you a written notice promptly followed by payment of the Base Salary due to you during the remainder of the Resignation Period and any pay accrued and owing under this Agreement up to the date of termination of your employment.

O. Termination for Cause. The Company may terminate your employment at any time for cause, effective upon delivery by the Company to you of a written notice of termination of your employment for cause. You will not be entitled to receive any further pay or compensation (except for pay, if any, accrued and owing under this Agreement up to the date of termination of your employment), severance pay, notice, payment in lieu of notice, benefits or damages of any kind, and for clarity, without limiting the foregoing, you will not be entitled to any bonus or pro rata bonus payment that has not already been awarded by the Company.

P. Termination Without Cause. The Company may terminate your employment without cause at any time upon providing you working notice of termination, or a lump sum payment of Base Salary in lieu of said notice, or an equivalent combination of working notice and a lump sum payment of Base Salary in lieu of notice, in the amount of twelve (12) months plus one (1) additional month for every one (1) year of consecutive service with the Company including service prior to the Effective Date, up to a combined maximum of eighteen (18) months (the "**Payment Period**").

In the event the Company provides you with any Base Salary in lieu of notice:

(i) subject to the insurer's terms of coverage, the Company will arrange for you to continue to receive group benefits insurance coverage up to the earlier of (I) the end of the Payment Period, or (II) the date you commence full-time employment (in the event the insurer does not continue coverage, the Company will pay you an amount equivalent to the cost of the monthly premiums the Company would have paid on your behalf for the group benefits insurance coverage that are terminated);

(ii) the Company will pay you an Average Bonus pro-rated for the period of the partial bonus year you actually worked immediately prior to the termination of your employment, less statutory and other applicable deductions as required, payable within four (4) weeks of the termination date, provided that if a bonus has not yet been determined for the preceding completed calendar year, the Company will first make that determination in the ordinary course using relevant criteria in a manner consistent with prior practice so that the Average Bonus can then be determined and paid in accordance with this provision;

(iii) the Company will pay you the RRSP Contributions it would have paid on your behalf for the balance of the Payment Period; and

(iv) notwithstanding any provision in this Agreement or in the Stock Option Plans to the contrary, the Company will extend the vesting and exercise rights of your vested and unvested stock options and other deferred compensation as follows:

(I) for stock options granted under the Current SOP and any prior stock option plan, the stock options will continue vesting until the end of the Payment Period, at which time all unvested options will be null and void, and all vested stock options will be exercisable until the earlier of the original expiry date of the options and the date that is three (3) months following the end of the Payment Period; and

(II) for stock options and other deferred compensation granted under the 2014 EIP and any subsequent incentive compensation plan, the stock options and other deferred compensation will continue to vest for a period of three (3) months after the date your employment terminates and all vested stock options and other deferred compensation will be exercisable until the earlier of the original expiry day of the stock options and deferred compensation and the date that is six (6) months after the date your employment terminates.

Any payment in lieu of notice provided to you will be inclusive of any termination or severance pay owing to you under applicable employment standards legislation and subject to statutory withholdings and other regular payroll deductions. You will not be entitled to receive any further pay or compensation except (i) as expressly set out in this Agreement, and (ii) the pay, if any, accrued and owing under this Agreement up to the date of termination of your employment.

No Implied Entitlement. Other than as expressly provided herein, you will not be entitled to receive any further pay or compensation, severance pay, notice, payment in lieu of notice, incentives, bonuses, benefits or damages of any kind.

Continued Effect. Notwithstanding any changes in the terms and conditions of your employment which may occur in the future, including any changes in position, duties or compensation, the termination provisions in this Agreement will continue to be in effect for the duration of your employment with the Company unless otherwise amended in writing and signed by the Company.

Authorization to Deduct Debts. If, on the date you leave employment, you owe the Company any money, you hereby authorize the Company to deduct any such debt from your final pay or any other payment due to you to the extent permitted by the *Employment Standards Act* if applicable. Any remaining debt will be immediately payable to the Company and you agree to satisfy such debt within 14 days of any demand for repayment.

Dispute Resolution. In the event of a dispute arising out of or in connection with this Agreement, or in respect of any legal relationship associated with it or from it, which does not involve the Company seeking a court injunction or other injunctive or equitable relief to protect its business, confidential information or intellectual property, or enforce the covenants hereunder, that dispute will be resolved confidentially as follows:

a. *Amicable Negotiation* – The parties agree that, both during and after the performance of their responsibilities under this Agreement, each of them will make *bona fide* efforts to resolve any disputes arising between them by amicable and expeditious negotiations.

b. *Mediation* – If the parties are unable to negotiate resolution of a dispute, either party may with the agreement of the other party refer the dispute to mediation by providing written notice to the other party. If the parties cannot agree on a mediator within fifteen (15) days of receipt of the notice to mediate, then either party may make application to the British Columbia Arbitration and Mediation Society to have one appointed. The mediation will be held in Vancouver, BC, in accordance with the British Columbia International Commercial Arbitration Centre's (the "**BCICAC**") Commercial Mediation Rules, and each party will bear its own costs, including one-half share of the mediator's fees.

c. *Arbitration* – If, after mediation, the parties have been unable to resolve a dispute or, at any time, if mediation is not undertaken, either party may refer the dispute for final and binding arbitration by providing written notice to the other party. If the parties cannot agree on an arbitrator within fifteen (15) days of receipt of the notice to arbitrate, then either party may make application to the British Columbia Arbitration and Mediation Society to appoint one. The arbitration will be held in Vancouver, BC, in accordance with the BCICAC's Shorter Rules for Domestic Commercial Arbitration. Each party will bear its own costs, including one-half share of the arbitrator's fees, provided that the arbitrator will have discretion to award costs against either party.

Legal Counsel. You have been advised by the Company to retain independent legal advice with respect to this offer of employment.

Currency. Except as otherwise specifically indicated, all monetary amounts referenced herein are in Canadian dollars.

Severability. If any part, article, section, clause, paragraph or subparagraph of this Agreement is held to be indefinite, invalid, illegal or otherwise voidable or

unenforceable for any reason, the entire Agreement will not fail on the account thereof and the validity, legality and enforceability of the remaining provisions will in no way be affected or impaired thereby.

Entire Understanding. We also confirm that this Agreement and the attached Non-Disclosure, Non-Solicitation and Non-Competition Agreement set forth our entire understanding of the terms of your employment with the Company, and cancels and supersedes all previous invitations, proposals, letters, correspondence, negotiations, promises, agreements (including your attached former employment agreement), covenants, conditions, representations and warranties with respect to the subject matter of this Agreement. Any modifications to these employment terms must be made in writing and signed by both you and the Company.

Governing Law. This Agreement and all matters arising hereunder will be governed by and construed in accordance with the laws of the Province of British Columbia.

If you have any questions or concerns regarding the above, please do not hesitate to contact me.

To accept this Agreement on the terms set out herein, please sign where indicated below, and return a signed copy of this Agreement along with a signed copy of the Employee Non-Disclosure, Non-Competition and Non-Solicitation Agreement to me.

Yours sincerely,

XENON PHARMACEUTICALS INC.

/s/ Simon N. Pimstone

Simon N. Pimstone
President & CEO

Attachments:

1) Your former Employee Agreement
2) Xenon Employee Non-Disclosure, Non-Solicitation and Non-Competition Agreement
3) Current Amended and Restated Stock Option Plan
4) 2014 Equity Incentive Plan

I hereby confirm that I have read, understand and voluntarily accept the terms of this Agreement:

/s/ Karen Corraini	October 3, 2014
Karen Corraini	**Date**

SCHEDULE A

Disclosure of Volunteer, Board and Other External Commitments

Position	Organization	Length of Appointment/Engagement
Board Member	Association of Corporate Counsel (ACC) BC Chapter	Indefinite/continuing
Member	Cystic Fibrosis Canada Research Advisory Council	Appointed Feb 1, 2014 for 3-year term may be extended
Volunteer/Lawyer	Pro-bono business/IP Advice to Cystic Fibrosis Canada	Indefinite/continuing
Lawyer	Corraini Law Group	Perform Occasional consulting/Legal Work, for third parties, on matters unrelated to Xenon.
Volunteer/Lawyer	CBA, LSBC, CCCA, LES, LESI	Occasional work on/for committees of these licensing and legal-related organizations

XENON

October 3, 2014

Confidential

Via Electronic Mail

Robin Sherrington
c/o Xenon Pharmaceuticals Inc.
3650 Gilmore Way
Burnaby, BC V5G 4W8

XENON
PHARMACEUTICALS INC.

3650 Gilmore Way
Burnaby, BC
Canada V5G 4W8

T 604-484-3300
F 604-484-3450

www.xenon-pharma.com

Dear Robin,

Re: Offer of Continued Employment

We are pleased to offer you continued employment with Xenon Pharmaceuticals Inc. (the "**Company**"), on the terms and conditions herein, and in consideration for the change of control protections provided to you by the Company. This Agreement will replace and supersede your existing employment agreement in its entirety; please read it carefully. If you wish to accept the terms herein, please execute and return this agreement to me today (the "**Effective Date**").

As of the Effective Date, you will continue to be engaged by the Company in the full-time position of Senior Vice President, Business & Corporate Development.

A. Base Salary. As of the Effective Date, you will continue to earn a base salary of $255,397 per year, less statutory and other applicable deductions as required, for all work and services you perform for the Company (the "**Base Salary**"). The Base Salary is payable semi-monthly in arrears in accordance with the Company's applicable payroll policies.

B. Annual Discretionary Bonus. In addition to your Base Salary, you are eligible to earn an annual discretionary bonus of up to 35% percent of your Base Salary, less statutory and other applicable deductions as required, for each completed calendar year of service. You will be eligible for this bonus in respect of the full 2014 calendar year without regard to the Effective Date. The payment and amount of the annual bonus is within the sole discretion of the Board of Directors (the "**Board**") and will be evaluated in January of each year in relation to the achievement of corporate and personal objectives. Such objectives will be established annually by the Board in its sole discretion. If you work the entire bonus year, you will be eligible for an annual discretionary bonus determined in the ordinary course using relevant criteria in a manner consistent with prior practice, even if the Company terminates your employment after the bonus year prior to the payment of the annual bonuses.

C. Annual Review. Your compensation package, including your salary and bonus percentage, will continue to be reviewed annually; any adjustment to the same is at the sole discretion of the Company provided that the Base Salary will not be reduced without your consent and subject to Sections L and M of this Agreement.

D. Expense Reimbursement. In accordance with its expense policy as amended from time to time, the Company will reimburse any authorized expenses actually and reasonably incurred in the course of performing your employment

duties. The Company will also provide to you, for the duration of your employment, any necessary work tools, such as a laptop computer and mobile phone. Subject to approval by the Company, you will also be reimbursed for out-of-pocket expenses incurred for attending courses or workshops related to your employment duties.

E. Reporting Structure/Responsibilities. You will report to the CEO. You will continue to perform the responsibilities and duties of your position, and subject to Sections L and M such other responsibilities and duties as may be requested by the CEO from time to time. You will at all times continue to: (i) conform to the reasonable and lawful directions of the Company and the Board; (ii) adhere to all applicable Company policies; (iii) give the Company the full benefit of your knowledge, expertise, skill and ingenuity; (iv) well and faithfully serve the Company; (v) devote your best efforts to furthering the interests of the Company; and (vi) exercise the degree of care, diligence and skill that a prudent executive would exercise in comparable circumstances.

You will not during your employment with the Company, be employed by, or provide products or services of any nature whatsoever to, any other person, company, organization or other entity without prior written permission from the Company. This does not restrict you from performing reasonable volunteer activities; however, you must obtain the consent of the Company if you wish serve on a board of directors or advisory board, or if you perform any paid work or services for another organizations. Schedule A contains a description of all such appointments and positions that you currently occupy, and all paid work and services you currently provide to outside organizations, to which the Company confirms that it has provided, and continues to provide, at its discretion, its permission.

F. Vacation and Sick Days. In accordance with the Company's policies, you will earn twenty (20) days of vacation per calendar year on a pro rata basis, and accrue five (5) sick days per calendar year on a pro rata basis. You must take your vacation within twelve (12) months of it being earned. Unused sick days will not be paid out at the end of the calendar year and may not be carried over.

G. Non-Disclosure, Non-Solicitation & Non-Competition Agreement. As a condition of entering into this agreement, you must enter into the enclosed Employee Non-Disclosure, Non-Solicitation and Non-Competition Agreement. Please note that this agreement also deals with confidentiality and the ownership of intellectual property developments. By entering into this agreement, you are agreeing that compliance with its provisions is reasonable and a necessary requirement in our highly competitive industry, and may be required by our agreements with our suppliers, customers, and distributors.

H. Stock Options. You will be eligible to participate in (i) the Company's Amended and Restated Stock Option Plan (the "**Current SOP**"), a current copy of which is enclosed with this Agreement, and (ii) if implemented, the 2014 Equity Incentive Plan that the Company is planning to adopt in connection with an initial public offering of the Company under the *US Securities Exchange Act* of 1934 (the "**2014 EIP**"), a current copy of which is enclosed with this Agreement, each as amended from time to time (together referred to as the "**Stock Option Plan**"). Nothing in this Agreement will affect in any way the stock options granted to you by the Company to date, all of which will, except as expressly provided in this

Agreement, continue to vest and be exercisable in accordance with the terms of the Company's grant and the applicable stock option plan of the Company (all applicable prior stock option plans, and the Stock Option Plan, are referred to as the "**Stock Option Plans**").

I. Benefits. You will be eligible to continue to participate in the Company's employee group benefit plans as offered to the Company's executives, and as amended, from time to time, subject to the Company's policies, eligibility rules, and the terms established by the service providers, as amended from time to time. You will be eligible to continue to participate in the Company's current Group RRSP Plan, under which the Company will pay you the greater of (i) an amount equal to your annual RRSP contributions or (ii) 5% of your Base Salary, provided that the Company will pay the portion equal to your RRSP annual contribution limit directly to your RRSP account and the balance directly to you, less applicable withholdings and deductions (the "**RRSP Contributions**").

J. Taxes. Any taxes, withholdings and premiums applicable to your employment compensation package with the Company will be deducted and remitted to the appropriate authorities and service providers in accordance with the Company's standard policies and the law.

K. Insurance and Indemnification. As an officer of the Company, you will be covered by its Directors' and Officers' Liability Insurance Policy, subject to the terms of the policy and any amendments made from time to time at the Board's discretion. Your coverage under such insurance policy will continue after your employment ends, in respect of your employment, subject to the terms of the policy.

L. Change of Control. In this Agreement:

a. "**Average Bonus**" means an amount that is (i) the sum of the annual bonus awards (expressed as a percentage of the applicable year's Base Salary) that you earned in each of the three (3) completed calendar years preceding the date your employment with the Company terminates, divided by (ii) three (3), multiplied by (iii) your Base Salary at the time your employment with the Company terminates [for example (15% + 5% + 10%) /3 = 10% of Base Salary].

b. **"Change of Control**" means:

   (i) the acquisition by any person or persons acting jointly or in concert (as determined by the Securities Act) ("**Person**"), whether directly or indirectly, of voting securities of the Company that, together with all other voting securities of the Company held by such Person, constitute in the aggregate more than 50% of all outstanding voting securities of the Company; provided, however, that for purposes of this subsection, the acquisition of additional securities by any one Person, who owns more than 50% of all outstanding voting securities of the Company will not be a Change of Control;

   (ii) an amalgamation, arrangement or other form of business combination of the Company with another corporation that results in the holders of voting securities of that other corporation holding, in the aggregate, more than 50% of all outstanding voting securities of the corporation resulting from the

business combination; provided, however, that for purposes of this subsection, the acquisition of additional securities by any one Person, who owns more than 50% of all outstanding voting securities of the Company will not be a Change of Control; or

(iii) a change in the ownership of a substantial portion of the Company's assets, including the sale, lease, transfer or exchange of a substantial portion of the Company's assets, to another Person, other than in the ordinary course of business of the Company, which occurs on the date that such Person acquires (or has acquired during the twelve (12) month period ending on the date of the most recent acquisition by such person or persons) assets from the Company that have a total gross fair market value equal to or more than fifty percent (50%) of the total gross fair market value of all of the assets of the Company immediately prior to such acquisition or acquisitions; provided, however, that for purposes of this subsection (iii), the following will not constitute a change in the ownership of a substantial portion of the Company's assets: (A) a transfer to a Related Entity, or (B) a transfer of assets by the Company to: (1) a stockholder of the Company (immediately before the asset transfer) in exchange for or with respect to the Company's stock, (2) an entity of which the Company has Control, (3) a Person, that owns, directly or indirectly, fifty percent (50%) or more of the all outstanding voting securities of the Company, or (4) an entity of which a Person described in this subsection (iii)(B)(3) has Control. For purposes of this subsection (iii), gross fair market value means the value of the assets of the Company, or the value of the assets being disposed of, determined without regard to any liabilities associated with such assets;

provided, however, that a Change in Control will not be deemed to have occurred if such Change in Control results solely from the issuance, in connection with a *bona fid*e public offering, financing or series of financings by the Company, of voting securities of the Company or any rights to acquire voting securities of the Company which are convertible into voting securities.

Further and for the avoidance of doubt, a transaction will not constitute a Change of Control if: (x) its sole purpose is to change the state or jurisdiction of the Company's incorporation, or (y) its sole purpose is to create a holding company the voting securities of which will be owned in substantially the same proportions by the persons who held the Company's voting securities immediately before such transaction.

c. **"Good Reason**" means any of the following occurring within twelve (12) months after the occurrence of a Change of Control:

(i) any unilateral change or series of adverse changes to your employment responsibilities, reporting relationship or status within the Company, such that immediately after such a change or series of adverse changes to your responsibilities, reporting relationship and status, taken as a whole, and taking into account the size and complexity of the business of the Company at that time, are substantially less than those assigned to you immediately prior to such change or series of adverse changes; or

(ii) a material reduction by the Company in your Base Salary or other compensation as in effect prior to the Change of Control that would constitute a constructive dismissal at common law; or

(iii) the taking of any action by the Company, or the failure by the Company to take any action, that would materially adversely affect your participation in, or materially reduce your aggregate benefits under, the total package of incentive, bonus, compensation, RRSP, life insurance, health, accident disability and other similar plans in which you are participating prior to the action by the Company or the failure by the Company to take any action; or

(iv) the unilateral requirement that you relocate anywhere outside Metro Vancouver (or, if based at the Company's offices in another place, the requirement that you relocate somewhere else) where the new location you are required to report to is either not in Canada or both (i) more than 60 kilometers from your previous work location and (ii) more than 60 kilometers from your primary residence; or

(v) failure or refusal of the Successor Company to offer you terms and conditions of employment, including the provisions of Section M of this Agreement, that are substantially the same as the provisions of this Agreement;

(vi) subject to the terms of this Agreement, any reason which would be considered to amount to constructive dismissal by an arbitrator under the laws applicable in British Columbia; or

(vii) termination of your employment without cause by the Company or a Successor Company,

provided that any change or series of in reporting relationship alone will not constitute good reason.

d. "**Successor Company**" means, in connection with a Change of Control, the surviving or acquiring company or entity.

M. Good Reason in Connection With or Following Change of Control: In the event of Good Reason, where the Good Reason occurs:

a. prior to the Change of Control but is related or connected to the Change of Control; or

b. within twelve (12) months of the date of the Change of Control,

then your employment will end on the date it is terminated by the Company or Successor Company or the date terminated by you for Good Reason, in which case the Company or Successor Company will provide you with the following:

a. twelve (12) months' Base Salary, plus one (1) additional month of Base Salary for every year of consecutive service with the Company and Successor Company including service prior to the Effective Date, up to a combined maximum of eighteen (18) months (the "**Payment Period**");

b. payment of your Average Bonus pro-rated for the period of the bonus year you actually worked, less statutory and other applicable deductions as required, payable within four (4) weeks of the termination date provided that if a bonus has not yet been determined for the preceding completed calendar year, the Company or Successor Company will first make that determination in the ordinary course using relevant criteria in a manner consistent with prior practice so that the Average Bonus can then be determined and paid in accordance with this provision;

c. the RRSP Contributions the Company or Successor Company would have paid on your behalf during the Payment Period and, if unpaid, for the period earned and accrued up to the termination of your employment;

d. notwithstanding any provision in the Stock Option Plans to the contrary:

   (i) immediate vesting of all unvested stock options and other deferred compensation awards already granted to you by the Company or the Successor Company;

   (ii) with respect to stock options granted pursuant to the Current SOP and any prior stock option plan, continued exercise rights up to ninety (90) days after the end of the Payment Period, at which time such rights will be null and void; and

   (iii) with respect to stock options and other deferred compensation granted pursuant to the 2014 EIP and any subsequent deferred compensation plan, continued exercise rights for the longer of the period stipulated in the applicable plan or grant and 6 months from the termination of your employment.

e. subject to the applicable insurer's terms of coverage, the Company or Successor Company will arrange for you to continue to receive group benefits insurance coverage up to the earlier of (i) the end of the Payment Period, or (ii) the date you commence full-time employment. In the event the insurer does not continue coverage, the Company will pay you an amount equivalent to the cost of the monthly premiums the Company would have paid on your behalf for the group benefits insurance coverage that are terminated.

In the case of Good Reason (other than Good Reason under Section L.c.(vii)), you must provide the Company or Successor Company with thirty (30) days' written notice of Good Reason within three (3) months of the occurrence of Good Reason or, where based on a series of changes, within three (3) months from the occurrence of the last change in the series of changes. Where the Good Reason is based in whole or in part on a series of changes, the notice period that is based on three (3) months from the occurrence of Good Reason will commence on the occurrence of the last change in the series. Within thirty (30) days of receipt of written notice of Good Reason, the Company or the Successor Company may correct, reverse, rectify or otherwise resolve the change or series of changes that constitute Good Reason, in which case your employment with the Company or Successor Company will continue.

The payments above will be paid to you within four (4) weeks of the termination date, will be inclusive of any termination or severance pay owing to you under applicable employment standards legislation, and will be subject to statutory withholdings and other regular payroll deductions. You will be entitled to the pay, if any, accrued and owing under this Agreement up to the date of termination of your employment. In the event you trigger termination under the Change of Control/Good Reason terms above or are entitled to the termination provisions above as a result of the termination of your employment without cause, you will not be eligible for any payment pursuant to the termination sections below.

Termination:

N. Resignation. If for any reason you should wish to leave the Company, you will provide the Company with three (3) months' prior written notice of your intention (the "**Resignation Period**"). You agree that in order to protect the Company's interests, the Company may, in its sole and unfettered discretion, waive the Resignation Period and end your employment immediately by delivering to you a written notice promptly followed by payment of the Base Salary due to you during the remainder of the Resignation Period and any pay accrued and owing under this Agreement up to the date of termination of your employment.

O. Termination for Cause. The Company may terminate your employment at any time for cause, effective upon delivery by the Company to you of a written notice of termination of your employment for cause. You will not be entitled to receive any further pay or compensation (except for pay, if any, accrued and owing under this Agreement up to the date of termination of your employment), severance pay, notice, payment in lieu of notice, benefits or damages of any kind, and for clarity, without limiting the foregoing, you will not be entitled to any bonus or pro rata bonus payment that has not already been awarded by the Company.

P. Termination Without Cause. The Company may terminate your employment without cause at any time upon providing you working notice of termination, or a lump sum payment of Base Salary in lieu of said notice, or an equivalent combination of working notice and a lump sum payment of Base Salary in lieu of notice, in the amount of twelve (12) months plus one (1) additional month for every one (1) year of consecutive service with the Company including service prior to the Effective Date, up to a combined maximum of eighteen (18) months (the "**Payment Period**").

In the event the Company provides you with any Base Salary in lieu of notice:

(i) subject to the insurer's terms of coverage, the Company will arrange for you to continue to receive group benefits insurance coverage up to the earlier of (I) the end of the Payment Period, or (II) the date you commence full-time employment (in the event the insurer does not continue coverage, the Company will pay you an amount equivalent to the cost of the monthly premiums the Company would have paid on your behalf for the group benefits insurance coverage that are terminated);

(ii) the Company will pay you an Average Bonus pro-rated for the period of the partial bonus year you actually worked immediately prior to the termination of your employment, less statutory and other applicable deductions as required, payable within four (4) weeks of the termination date, provided that if a bonus has not yet been determined for the preceding completed calendar year, the Company will first make that determination in the ordinary course using relevant criteria in a manner consistent with prior practice so that the Average Bonus can then be determined and paid in accordance with this provision;

(iii) the Company will pay you the RRSP Contributions it would have paid on your behalf for the balance of the Payment Period; and

(iv) notwithstanding any provision in this Agreement or in the Stock Option Plans to the contrary, the Company will extend the vesting and exercise rights of your vested and unvested stock options and other deferred compensation as follows:

(I) for stock options granted under the Current SOP and any prior stock option plan, the stock options will continue vesting until the end of the Payment Period, at which time all unvested options will be null and void, and all vested stock options will be exercisable until the earlier of the original expiry date of the options and the date that is three (3) months following the end of the Payment Period; and

(II) for stock options and other deferred compensation granted under the 2014 EIP and any subsequent incentive compensation plan, the stock options and other deferred compensation will continue to vest for a period of three (3) months after the date your employment terminates and all vested stock options and other deferred compensation will be exercisable until the earlier of the original expiry day of the stock options and deferred compensation and the date that is six (6) months after the date your employment terminates.

Any payment in lieu of notice provided to you will be inclusive of any termination or severance pay owing to you under applicable employment standards legislation and subject to statutory withholdings and other regular payroll deductions. You will not be entitled to receive any further pay or compensation except (i) as expressly set out in this Agreement, and (ii) the pay, if any, accrued and owing under this Agreement up to the date of termination of your employment.

No Implied Entitlement. Other than as expressly provided herein, you will not be entitled to receive any further pay or compensation, severance pay, notice, payment in lieu of notice, incentives, bonuses, benefits or damages of any kind.

Continued Effect. Notwithstanding any changes in the terms and conditions of your employment which may occur in the future, including any changes in position, duties or compensation, the termination provisions in this Agreement will continue to be in effect for the duration of your employment with the Company unless otherwise amended in writing and signed by the Company.

Authorization to Deduct Debts. If, on the date you leave employment, you owe the Company any money, you hereby authorize the Company to deduct any such debt from your final pay or any other payment due to you to the extent permitted by the *Employment Standards Act* if applicable. Any remaining debt will be immediately payable to the Company and you agree to satisfy such debt within 14 days of any demand for repayment.

Dispute Resolution. In the event of a dispute arising out of or in connection with this Agreement, or in respect of any legal relationship associated with it or from it, which does not involve the Company seeking a court injunction or other injunctive or equitable relief to protect its business, confidential information or intellectual property, or enforce the covenants hereunder, that dispute will be resolved confidentially as follows:

a. *Amicable Negotiation* – The parties agree that, both during and after the performance of their responsibilities under this Agreement, each of them will make *bona fide* efforts to resolve any disputes arising between them by amicable and expeditious negotiations.

b. *Mediation* – If the parties are unable to negotiate resolution of a dispute, either party may with the agreement of the other party refer the dispute to mediation by providing written notice to the other party. If the parties cannot agree on a mediator within fifteen (15) days of receipt of the notice to mediate, then either party may make application to the British Columbia Arbitration and Mediation Society to have one appointed. The mediation will be held in Vancouver, BC, in accordance with the British Columbia International Commercial Arbitration Centre's (the "**BCICAC**") Commercial Mediation Rules, and each party will bear its own costs, including one-half share of the mediator's fees.

c. *Arbitration* – If, after mediation, the parties have been unable to resolve a dispute or, at any time, if mediation is not undertaken, either party may refer the dispute for final and binding arbitration by providing written notice to the other party. If the parties cannot agree on an arbitrator within fifteen (15) days of receipt of the notice to arbitrate, then either party may make application to the British Columbia Arbitration and Mediation Society to appoint one. The arbitration will be held in Vancouver, BC, in accordance with the BCICAC's Shorter Rules for Domestic Commercial Arbitration. Each party will bear its own costs, including one-half share of the arbitrator's fees, provided that the arbitrator will have discretion to award costs against either party.

Legal Counsel. You have been advised by the Company to retain independent legal advice with respect to this offer of employment.

Currency. Except as otherwise specifically indicated, all monetary amounts referenced herein are in Canadian dollars.

Severability. If any part, article, section, clause, paragraph or subparagraph of this Agreement is held to be indefinite, invalid, illegal or otherwise voidable or

unenforceable for any reason, the entire Agreement will not fail on the account thereof and the validity, legality and enforceability of the remaining provisions will in no way be affected or impaired thereby.

Entire Understanding. We also confirm that this Agreement and the attached Non-Disclosure, Non-Solicitation and Non-Competition Agreement set forth our entire understanding of the terms of your employment with the Company, and cancels and supersedes all previous invitations, proposals, letters, correspondence, negotiations, promises, agreements (including your attached former employment agreement), covenants, conditions, representations and warranties with respect to the subject matter of this Agreement. Any modifications to these employment terms must be made in writing and signed by both you and the Company.

Governing Law. This Agreement and all matters arising hereunder will be governed by and construed in accordance with the laws of the Province of British Columbia.

If you have any questions or concerns regarding the above, please do not hesitate to contact me.

To accept this Agreement on the terms set out herein, please sign where indicated below, and return a signed copy of this Agreement along with a signed copy of the Employee Non-Disclosure, Non-Competition and Non-Solicitation Agreement to me.

Yours sincerely,

XENON PHARMACEUTICALS INC.

/s/ Simon N. Pimstone

Simon N. Pimstone
President & CEO

Attachments:

1) Your former Employee Agreement
2) Xenon Employee Non-Disclosure, Non-Solicitation and Non-Competition Agreement
3) Current Amended and Restated Stock Option Plan
4) 2014 Equity Incentive Plan

I hereby confirm that I have read, understand and voluntarily accept the terms of this Agreement:

/s/ Robin Sherrington	October 3, 2014
Robin Sherrington	**Date**

SCHEDULE A

Disclosure of Volunteer, Board and Other External Commitments

Position	Organization	Length of Appointment/Engagement
N/A		

Exhibit 10.15

INDEMNIFICATION AGREEMENT

BETWEEN

XENON PHARMACEUTICALS INC.

AND

—

MADE AS OF

—, 2014

INDEMNIFICATION AGREEMENT,

THIS AGREEMENT is made as of —, 2014

BETWEEN

[Insert Name of Individual], of the — of — in the — of — (the "**Indemnified Party**")

- and -

XENON PHARMACEUTICALS INC., a corporation incorporated under the laws of Canada (the **"**Corporation").

WHEREAS the *Canada Business Corporations Act* (the "**Act**") permits the Corporation to indemnify directors or officers of the Corporation and certain other individuals;

AND WHEREAS it is in the best interests of the Corporation to attract and retain competent persons to serve as directors or officers or in similar capacities, and the entering into of an agreement containing indemnification provisions of the kind contained in this Agreement is reasonable and necessary to achieving those goals;

AND WHEREAS the By-Laws of the Corporation contemplate that the Indemnified Party may be so indemnified;

AND WHEREAS the Indemnified Party is willing to act or to continue to act as a director or officer (or both) of the Corporation or is currently or may, in the future, be willing to act or to continue to act, at the request of the Corporation, as a director or officer, or an individual acting in a similar capacity or holding a position equivalent to that of a director or officer, of another entity, if, among other things, the Corporation provides the Indemnified Party with contractual assurance that the protection against personal liability contemplated in this Agreement will be available to the Indemnified Party to the fullest extent permitted by applicable law;

AND WHEREAS the Corporation and the Indemnified Party consider it desirable to enter into this Agreement, and in entering such Agreement, affirm that they intend that all the provisions of this Agreement be given legal effect to the fullest extent permitted by applicable law;

NOW THEREFORE, in consideration of the Indemnified Party agreeing to serve or continue to serve, as set forth above, and having regard to the premises and the covenants and agreements contained herein, the receipt and sufficiency of which are acknowledged by the Corporation, the parties agree as follows:

ARTICLE 1 - INTERPRETATION

1.01 **Definitions**

In this Agreement, unless something in the subject matter or context is inconsistent therewith:

"Agreement" means this indemnification agreement, including its recitals and schedules, as amended from time to time.

"Board of Directors" means the board of directors of the Corporation.

"Business Day" means a day other than a Saturday, Sunday or statutory holiday in Vancouver, British Columbia.

"Cost Advance" means an advance of moneys to the Indemnified Party of Costs before the final disposition of any Proceeding.

"Costs" means any and all costs, charges and expenses reasonably incurred by the Indemnified Party in respect of any Proceeding (including, without limitation, any and all costs, charges and expenses which the Indemnified Party may reasonably incur, suffer, sustain or be required to pay in connection with investigating, initiating, preparing for, defending, serving as or being a witness, providing evidence in connection with, attending any meeting, discovery, trial or hearing, instructing or receiving advice of the Indemnified Party's own or other counsel or other professional advisors in relation to, preparing to prosecute, defend or settle, setting, appealing or otherwise participating in or otherwise being involved in (including in each case, on appeal), any Proceeding, whether or not any Proceeding is commenced, including all legal and other professional fees, charges and disbursements and includes all cost, charges and expenses reasonably incurred by the Indemnified Party in connection with the enforcement of the Indemnified Party's rights under this Agreement).

"Defence Counsel" has the meaning set out in Section 3.01(2).

"Defence Notice" has the meaning set out in Section 3.01(1).

"Eligible Event" means any event or occurrence that takes place either before or after the execution of this Agreement and arising out of or in connection with, or incidental to (i) the fact that the Indemnified Party (A) is or was a director or officer of the Corporation; or (B) is or was serving at the request of the Corporation as a director or officer or in a similar capacity, or holds or held a position equivalent to that of a director or officer, of a Related Entity; or (ii) anything done or not done by the Indemnified Party in any such capacity.

"Final Judgment" means, in respect of any matter, a final judicial determination (as to which all rights of appeal therefrom have been exhausted or lapsed) of a court having jurisdiction over such matter.

"Insolvency Situation" has the meaning set out in Section 5.01(9).

"**Liabilities**" means any and all Costs, charges and expenses of whatever nature or kind (including damages, judgments, awards, fines, penalties and amounts paid in settlement of a Proceeding and reasonable legal or other professional fees and disbursements and all other out-of-pocket expenses) suffered, sustained or incurred by, or imposed upon, the Indemnified Party, or which the Indemnified Party is required to pay, in connection with investigating, initiating, preparing for, defending, serving as or being a witness, providing evidence in connection with, attending any meeting, discovery, trial or hearing, instructing or receiving advice of the Indemnified Party's own or other counsel or other professional advisors in relation to, preparing to prosecute, defend or settle, setting, appealing or otherwise participating in, or otherwise being involved in (including, in each case, on appeal), any Proceeding, and includes any federal, provincial, municipal or foreign taxes imposed on the Indemnified Party as a result of the actual or deemed receipt of any payments under this Agreement.

"**Notice of Proceedings**" has the meaning set out in Section 3.01(1).

"**Policies**" means director and officer policy or policies of insurance, and "**Policy**" has a corresponding meaning.

"**Proceeding**" means any current, threatened, pending, commenced, continuing or completed action, suit, proceeding, hearing, inquiry, investigation, arbitration or alternative dispute resolution mechanism or procedure, howsoever arising, whether civil, criminal, administrative, investigative or other, and whether arising in law, equity or under statute, rule, regulation or ordinance of any governmental or administrative body or otherwise, and whether made or commenced by the Corporation or any Related Entity and any appeal or appeals therefrom, in which the Indemnified Party is, has been or may be involved (including, without limitation, as a party, or otherwise) or is or may be liable for or in respect of a judgment, penalty or fine in, or Costs related thereto, by reason of or arising, in whole or in part, out of or in connection with or incidental to an Eligible Event.

"**Related Entity**" means any entity of which the Indemnified Party acts or acted as a director or officer or in a similar capacity, or holds or held a position equivalent to that of a director or officer, at the request of the Corporation.

"**Subsidiary**" means, with respect to any person, an entity that is controlled by such person.

"**Tax Indemnity Amounts**" has the meaning set out in Section 2.09(1).

1.02 **Headings**

The division of this Agreement into Articles and Sections and the insertion of headings are for convenience of reference only and do not affect the construction or interpretation of this Agreement. The terms "hereof", "hereunder" and similar expressions refer to this Agreement and not to any particular Article, Section or other portion hereof. Unless something in the subject matter or context is inconsistent therewith, references herein to Articles, Sections and Schedules are to Articles and Sections of and Schedules to this Agreement.

1.03 **Extended Meanings**

In this Agreement words importing the singular number include the plural and vice versa, words importing any gender include all genders and words importing persons include individuals, corporations, limited and unlimited liability companies, general and limited partnerships, associations, trusts, unincorporated organizations, joint ventures and governmental authorities. The term “including” means “including without limiting the generality of the foregoing” and the term “third party” means any person other than the Corporation and the Indemnified Party.

1.04 **Statutory References**

In this Agreement, unless something in the subject matter or context is inconsistent therewith or unless otherwise herein provided, a reference to any statute is to that statute as now enacted or as the same may from time to time be amended, re-enacted or replaced and includes any regulations, rules or policies made thereunder.

1.05 **Control**

(1) For the purposes of this Agreement,

(a) a person controls a body corporate if securities of the body corporate to which are attached more than 50% of the votes that may be cast to elect directors of the body corporate are beneficially owned by the person and the votes attached to those securities are sufficient, if exercised, to elect a majority of the directors of the body corporate;

(b) a person controls an unincorporated entity, other than a limited partnership, if more than 50% of the ownership interests, however designated, into which the entity is divided are beneficially owned by that person and the person is able to direct the business and affairs of such entity; and

(c) the general partner of a limited partnership controls the limited partnership.

(2) A person who controls an entity is deemed to control any entity that is controlled, or deemed to be controlled, by such entity.

(3) A person is deemed to control, within the meaning of Section 1.05(1)(a) or (1)(b), an entity if the aggregate of:

(a) any securities of the entity that are beneficially owned by that person, and

(b) any securities of the entity that are beneficially owned by any entity controlled by that person is such that, if that person and all of the entities referred to in Section 1.05(3)(b) that beneficially own securities of the entity were one person, that person would control the entity.

ARTICLE 2 - RIGHT OF INDEMNITY

2.01 **Right of Indemnity**

Upon and subject to the terms and conditions hereof, the Corporation will indemnify and save harmless the Indemnified Party and the Indemnified Party's heirs and personal and other legal representatives from and against all Liabilities, to the fullest extent permitted by applicable law.

2.02 **Cost Advances**

(1) Upon and subject to the terms and conditions hereof, including Section 2.05, and to the extent permitted by law, if the Board of Directors of the Corporation has determined, in good faith and based on the representations made to the Corporation by the Indemnified Party, that the Indemnified Party is or may to be entitled to indemnity hereunder in respect of any Proceeding, the Corporation will, upon receipt by the Corporation of a written demand by the Indemnified Party, promptly, and in any event, no more than 20 Business Days after receipt by the Corporation of such demand, either make a Cost Advance to the Indemnified Party in the amount specified in such demand or, if the Board of Directors is unwilling to pay that amount or is unable to determine if it is entitled to pay that amount by way of indemnity, make a Cost Advance to the Indemnified Party in an amount sufficient to pay on behalf of or reimburse the Indemnified Party for any Costs incurred or paid by the Indemnified Party in respect to such Proceeding. Each such written demand will include (i) a written affirmation of the Indemnified Party's good faith belief that the Indemnified Party is entitled to indemnification hereunder, together with particulars of the Costs to be covered by the proposed Cost Advance; and (ii) a written undertaking by the Indemnified Party to repay all Cost Advances if and to the extent that it is determined pursuant to a Final Judgment that the Indemnified Party is not entitled to indemnification hereunder or that the payment of such Costs is prohibited by applicable law. Such written undertaking to repay Cost Advances will be unsecured and no interest will be charged thereon.

(2) The Indemnified Party will repay to the Corporation, upon demand, Cost Advances (i) if and to the extent that it is determined by a Final Judgment that the Indemnified Party is not entitled to indemnification hereunder or that the payment of such Costs is prohibited by applicable law; and (ii) subject to any right of counterclaim or set off in favour of the Indemnified Party.

2.03 **Limits of Indemnity**

The indemnity provided in Section 2.01 will not apply unless, in connection with the matter which gave rise or will give rise to the Liabilities for which indemnification is sought hereunder, the Indemnified Party:

(a) acted honestly and in good faith with a view to the best interests of the Corporation or, as the case may be, the best interests of the Related Entity; and

(b) in the case of a criminal or administrative Proceeding that is enforced by a monetary penalty, the Indemnified Party had reasonable grounds for believing that the Indemnified Party's conduct was lawful.

2.04 **Exceptions to Indemnity and Cost Advances**

Notwithstanding any other provision of this Agreement, the Corporation will not, as applicable, be obligated pursuant to the terms of this Agreement to indemnify, or make Cost Advances to, the Indemnified Party:

(a) for any amount in respect of which the Indemnified Party may not be relieved of liability under the Act or otherwise at law;

(b) arising in connection with any Proceeding initiated or commenced by the Indemnified Party against (i) the Corporation or any Related Entity, unless it is brought to establish or enforce any right under this Agreement, or (ii) any other person; unless, in either case, (A) the Corporation or the Related Entity, as applicable, has joined in or consented to the initiation of such Proceeding, or (B) such Proceeding is a counterclaim to any Proceeding in respect of which the Indemnified Party is otherwise entitled to indemnification hereunder;

(c) to the extent the Indemnified Party is indemnified or reimbursed for Liabilities or Cost Advances, as applicable, and is, in each case, actually paid, other than pursuant to this Agreement or pursuant to a Policy (without any written obligation to reimburse any third party for such Liabilities or Cost Advances), as applicable;

(d) to the extent that payment is actually made to the Indemnified Party under a valid and enforceable Policy (notwithstanding the foregoing, this subsection cannot be relied upon by the Corporation with respect to denying any subrogation claim commenced against the Corporation by an insurer seeking recovery from the Corporation of any payment paid by such insurer, pursuant to a Policy, to the Indemnified Party);

(e) for a disgorgement of profits made from the purchase and sale by the Indemnified Party of securities pursuant to Section 155(5) of the Securities Act (British Columbia) or similar provisions of any applicable Canadian provincial law or common law or to the extent that Section 16 of the U.S. *Securities Exchange Act* of 1934 is applicable to the Corporation, for expenses or the payment of profits arising from the purchase and sale by the Indemnified Party of securities in violation of Section 16(b) of the U.S. *Securities Exchange Act* of 1934, as amended, or any similar successor statute; or

(f) arising out of the Indemnified Party's breach of any employment agreement with the Corporation or any of its Subsidiaries.

2.05 **Actions by the Corporation**

In respect of a Proceeding by or on behalf of the Corporation or a Related Entity to procure a judgment in its favour to which the Indemnified Party is made a party by reason of being or having been a director or officer of the Corporation or, at the request of the Corporation, a director or officer, or an individual acting in a similar capacity, of a Related Entity, the Corporation will not indemnify the Indemnified Party or make Cost Advances to the Indemnified Party unless court approval to furnish such indemnity is obtained in accordance with the applicable provisions of the Act. Unless (i) the indemnity provided pursuant to this Agreement does not apply as contemplated pursuant to Section 2.03, or (ii) pursuant to Section 2.04, excluding Section 2.04(a), the Corporation is not obligated pursuant to the terms of this Agreement to indemnify for Liabilities in relation to such Proceeding, upon written request by the Indemnified Party, the Corporation will promptly make application for approval of the court having jurisdiction to furnish indemnification and make Cost Advances in connection with such Proceeding.

2.06 **No Presumption**

Unless a court of competent jurisdiction otherwise has held or decided that the Indemnified Party is not entitled to indemnification under this Agreement, the determination of any Proceeding by judgment, order, settlement (whether with or without court approval) or conviction does not and will not, of itself, create a presumption either that the Indemnified Party did not satisfy or has not adhered to any particular standard of conduct or have any particular belief or grounds for belief (including that the Indemnified Party did not act honestly and in good faith with a view to the best interests of the Corporation or a Related Entity or did not have reasonable grounds for believing that the Indemnified Party's conduct was lawful) or that the Indemnified Party is not entitled to indemnification under this Agreement.

2.07 **Right to Independent Legal Counsel**

If the Indemnified Party is named as a party or a witness to any Proceeding, or the Indemnified Party is questioned or any of his or her actions, omissions or activities are in any way investigated, reviewed or examined in connection with or in anticipation of any actual or potential Proceeding, the Indemnified Party will be entitled to retain independent legal counsel at the Corporation's expense to act on an Indemnified Party's behalf to provide an initial assessment to the Indemnified Party of the appropriate course of action for the Indemnified Party. Any continued representation of the Indemnified Party by such legal counsel will be subject to Section 3.01.

2.08 **Payment for Expenses of a Witness**

Notwithstanding any other provision of this Agreement, to the extent that the Indemnified Party is, by reason of the fact that the Indemnified Party is or was a director or officer of the Corporation or of another entity at the Corporation's request, a witness other than as a named party in a Proceeding, the Corporation will pay to the Indemnified Party all out-of-pocket Liabilities actually and reasonably incurred by the Indemnified Party or on the Indemnified Party's behalf in connection therewith. The Indemnified Party will also be compensated by the Corporation at the rate of $1,000.00 per day (or partial day) provided that the Indemnified Party will not be entitled to the per diem if he or she is a full-time employee of the Corporation when the cooperation is sought.

2.09 **Income Tax**

(1) Each payment made by the Corporation to the Indemnified Party pursuant to this Agreement will be made without setoff, counterclaim or reduction for, and free from and clear of, and without deduction for or because of, any and all present or future taxes imposed, levied, collected, assessed or withheld by or within any taxing jurisdiction, unless the Corporation is required by law or the interpretations thereof by any relevant governmental authority to make such withholding or deduction. If the Corporation does not pay, cause to be paid or remit payments due hereunder free from and clear of such taxes, then the Corporation will forthwith pay the Indemnified Party such additional amounts (the **"Tax Indemnity Amounts**") as may be necessary in order that the net after taxes amount of every payment made to the Indemnified Party, after provision for payment of any taxes payable by the Corporation and/or the Indemnified Party (including any deduction or withholding of taxes imposed, levied, collected, assessed or withheld by or within any taxing jurisdiction on or with respect to Tax Indemnity Amounts and taxes on or in respect of the receipt of Tax Indemnity Amounts), will be equal to the amount that the Indemnified Party would have received had there been no such taxes.

(2) If, as a result of any payment by the Corporation pursuant this Agreement, the Indemnified Party is required to pay any taxes imposed, levied, collected, assessed or withheld by any taxing jurisdiction or if a governmental authority asserts the imposition of such taxes, then the Corporation will, upon demand by the Indemnified Party, indemnify the Indemnified Party for the imposition or payment of any such taxes, whether or not such taxes are correctly or legally asserted, and for any taxes on such indemnity payments, in each case, together with any interest, penalties and expenses in connection therewith. All such amounts will be payable by the Corporation on demand by the Indemnified Party.

ARTICLE 3 - PROCEDURES

3.01 **Notice**

(1) Promptly after the assertion, commencement or threat of commencement by any third party of any Proceeding against the Indemnified Party that results or may result in the incurrence by such Indemnified Party of any Liabilities for which such Indemnified Party would be entitled to indemnification, or in any demand by the Indemnified Party for Cost Advances, pursuant to this Agreement, the Indemnified Party will promptly notify the Corporation of the

assertion, commencement or threatened commencement of such Proceeding. Such notice (a **"Notice of Proceedings"**) will also specify with reasonable detail (to the extent the information is reasonably available) the factual basis for the Proceeding, the amount claimed by the third party or, if such amount is not then determinable, a reasonable estimate of the likely amount of the claim by the third party. The failure to promptly provide such Notice of Proceeding will not relieve the Corporation of any obligation to indemnify the Indemnified Party or to make Cost Advances under this Agreement, except to the extent such failure prejudices the Corporation or any Related Entity. Thereupon, the Corporation will have the right, upon written notice (the **"Defence Notice"**) to the Indemnified Party within 20 Business Days after receipt by the Corporation of the Notice of Proceeding to conduct, at its own expense, the defence against the Proceeding in its own name or, if necessary, in the name of the Indemnified Party.

(2) The Defence Notice will specify the counsel the Corporation will appoint to defend such Proceeding (the "**Defence Counsel**"). The Indemnified Party will have the right to employ separate counsel in any Proceeding and to participate in the defence thereof, but the fees and expenses of such counsel will be at the expense of the Indemnified Party and will not be included as part of any Costs or Liabilities incurred by the Indemnified Party for which the Indemnified Party will be entitled to claim from the Corporation unless: (i) the Corporation failed to give the Defence Notice within the prescribed period; (ii) the Indemnified Party has received a written opinion of counsel, reasonably acceptable to the Corporation, to the effect that the interests of the Indemnified Party and the Corporation with respect to the Proceeding are sufficiently adverse to prohibit the representation by the same counsel of both parties under applicable ethical rules; or (iii) the employment of such counsel at the expense of the Corporation has been specifically authorized by the Corporation. The party conducting the defence of any Proceeding will keep the other party apprised of all significant developments in relation thereto.

(3) The Indemnified Party and the Corporation will reasonably cooperate with each other and, if applicable, their respective counsel in the investigation related to, and defence of, any Proceeding and will make available to each other all relevant books, records, documents and files and will otherwise use reasonable efforts to assist each other's counsel to conduct a proper and adequate defence.

(4) The Corporation may conduct any investigation it considers appropriate of any Proceeding of which it receives notice under Section 3.01(1), and will pay all costs of that investigation.

ARTICLE 4 - SETTLEMENT

4.01 Conduct of Settlements

(1) The Corporation will not, without the Indemnified Party's prior written consent (such consent not to be unreasonably withheld or delayed), settle, compromise, consent to the entry of any judgment in or otherwise seek to terminate any Proceeding in respect of which indemnification or a Cost Advance has been sought hereunder unless such settlement, compromise, consent or termination (i) includes an unconditional release of the Indemnified

Party from any liabilities on claims that are the subject matter of such Proceeding, and (ii) does not include a statement as to, or an admission of, fault, culpability or a failure to act by or on behalf of the Indemnified Party.

(2) The Corporation will not be liable for any settlement of any Proceeding effected without its prior written consent, and the Indemnified Party will not, without the prior written consent of the Corporation settle, compromise, consent to the entry of any judgement in or otherwise seek to terminate any Proceeding. Notwithstanding the foregoing, the Indemnified Party will have the right to negotiate a settlement in respect of any Proceeding without the prior written consent of the Corporation, provided that (i) the Indemnified Party will pay any compensation, payment costs or other liabilities to be under such settlement and the costs of negotiating and implementing such settlement, and will not seek indemnity from the Corporation in respect of such compensation, payment, costs or other Liabilities and will repay any Cost Advances previously made by the Corporation in respect of such Proceeding, and (ii) the settlement may not include a statement as to, or in admission of, fault, culpability or a failure to act by or on behalf of the Corporation or any Related Entity.

ARTICLE 5 - DIRECTOR AND OFFICER LIABILITY INSURANCE

5.01 **Liability Insurance**

(1) Subject to Section 5.01(2), the Corporation will, to the extent permitted by law and with the approval of the Board of Directors, obtain and maintain Policies. Such Policies in respect of the directors and officers of the Corporation and of each Related Entity will include such customary terms and conditions and such limits as are then available to the Corporation on reasonable commercial terms, having regard to the historical and current market capitalization of the Corporation, the nature and size of the business and operations of the Corporation and its Subsidiaries from time to time. In all such Policies maintained by the Corporation, the Indemnified Party will be named as an insured and the Policies will provide coverage covering the Indemnified Party on terms no less favourable to the Indemnified Party than the coverage the Corporation has in place for any (most favourably insured) director or officer of the Corporation. Upon written request of the Indemnified Party, the Corporation will provide to the Indemnified Party full particulars of the Policies that have been obtained and any proposed replacement or renewal Policies.

(2) The Corporation will have no obligation to obtain or maintain Policies if the Corporation determines in good faith that: (i) such insurance is not reasonably available in the market-place; (ii) the premium cost for such insurance is prohibitively expensive, given the nature and size of the business and operations of the Corporation and its Subsidiaries; (iii) the coverage provided by such insurance is limited by exclusions so as to provide an insufficient benefit to the Indemnified Party; or (iv) the Indemnified Party is covered by similar insurance maintained by a Subsidiary of the Corporation.

(3) Upon receipt by the Corporation of a Notice of Proceeding, the Corporation will promptly give notice to the insurer(s) under the Policies maintained by it and comply with all procedures and guidelines of the insurer(s) to ensure coverage of the Indemnified Party under the Policies.

(4) If the Indemnified Party ceases to be a director or officer of the Corporation or a director or officer, or an individual acting in a similar capacity (including an individual holding a position equivalent to that of a director or officer), of a Related Entity for any reason, then the Corporation will continue to purchase and maintain Policies for the benefit of the Indemnified Party on terms at least as favourable as the Policies that the Corporation (i) purchased and maintained for the benefit of the Indemnified Party immediately before the Indemnified Party ceased to be a director or officer of the Corporation or a director or officer, or an individual acting in a similar capacity, of a Related Entity; and (ii) purchases and maintains for the benefit of the directors and officers of the Corporation after the Indemnified Party ceases to be a director or officer of the Corporation or a director or officer, or an individual acting in a similar capacity, of a Related Entity. The Corporation will maintain such Policies and renewal thereof for a minimum of six years following the Indemnified Party ceasing to be a director or officer of the Corporation or a director or officer, or an individual acting in a similar capacity (including an individual holding a position equivalent to that of a director or officer), of a Related Entity, as the case may be. Alternatively, the Corporation may, in its sole discretion, elect to purchase for the Indemnified Party a non-cancellable six year director and officer run-off policy that provides coverage for the Indemnified Party after the Indemnified Party ceases to be a director or officer of the Corporation or a director or officer, or an individual acting in a similar capacity (including an individual holding a position equivalent to that of a director or officer), of a Related Entity, in each case that is at least as favourable as the coverage described in clause (i) of this Section.

(5) If one or more of the Policies providing coverage on a ‘claims-made’ basis is cancelled or is not renewed, the Corporation will use commercially reasonable efforts to promptly purchase the maximum degree of extended reporting period coverage available under such Policies unless replacement director and officer liability insurance coverage has been obtained that covers the Indemnified Party and that does not contain a ‘retroactive date’ so as to deprive the Indemnified Party of coverage for wrongful acts alleged to have been committed prior to the inception date of such replacement insurance, unless the Corporation determines in good faith that: (i) such insurance is not reasonably available in the market-place; (ii) the premium cost for such insurance is prohibitively expensive, given the nature and size of the business and operations of the Corporation and its Subsidiaries; (iii) the coverage provided by such insurance is limited by exclusions so as to provide an insufficient benefit to the Indemnified Party; or (iv) the Indemnified Party is covered by similar insurance maintained by a Subsidiary of the Corporation.

(6) In the event the Corporation is unable to fund the purchase of extended insurance coverage by reason of its insolvency or bankruptcy, the Indemnified Party will be given reasonable notice regarding the Corporation’s inability to fund such purchase together with an identification of the additional premium that would be required to exercise the extended reporting period coverage option of the relevant Policies.

(7) In the event that a Proceeding is brought in which the Indemnified Party is named as party or in respect of which the Indemnified Party may be entitled to receive payments or benefits under any Policy maintained by the Corporation, the Corporation will promptly pay, if permitted by applicable law, the insurance deductible applicable under any Policies providing coverage to the Indemnified Party.

(8) During the period when the Indemnified Party serves as a director or officer or both of the Corporation or a director or officer or both, or an individual acting in a similar capacity, of a Related Entity, and for a period of six years thereafter, the Corporation will promptly notify the Indemnified Party if (i) any of the Policies lapses, is cancelled, as a result of insolvency or bankruptcy of the Corporation or any other person or otherwise, is not renewed or any provision thereof relating to the extent or nature of the coverage provided thereunder is amended, changed or modified in any material respect; or (ii) any insurer informs the Corporation that all or part of any Proceeding is not covered by any of the Policies.

(9) If the Corporation anticipates that (i) the Corporation may become insolvent or otherwise unable to pay its liabilities as they become due (an "**Insolvency Situation**"); or (ii) a change of control of the Corporation may occur in the future and that, as a result of such Insolvency Situation or change of control, the Indemnified Party may in the future not have the benefit of director and officer liability insurance, the Corporation may purchase and fund for the Indemnified Party a non-cancellable six year director and officer run-off policy that provides coverage for the Indemnified Party. Such run-off director and officer insurance coverage will be made effective upon the occurrence of a change of control or Insolvency Situation, as the case may be.

(10) The indemnity provided for in this Agreement is separate and independent of the Policies and is not in any way limited to the amount of insurance provided under such Policies.

ARTICLE 6 - GENERAL

6.01 Further Assurances

Each of the Corporation and the Indemnified Party will from time to time execute and deliver all such further documents and instruments and do all acts and things as the other party may reasonably require to effectively carry out or better evidence or perfect the full intent and meaning of this Agreement.

6.02 Time of the Essence

Time is of the essence of this Agreement.

6.03 Benefit of the Agreement

This Agreement will enure to the benefit of and be binding upon the respective heirs, executors, administrators, other legal representatives, successors and permitted assigns of the parties hereto. In the event that the Corporation proposes to (i) amalgamate, consolidate with or merge or wind up into any other person and the Corporation will cease to exist as a legal entity or will not be the continuing or surviving corporation or entity of such amalgamation, consolidation, merger or winding up; or (ii) transfer or dispose of all or substantially all of its properties and assets to any person or persons (including a lease, licence, long term supply

agreement or other arrangement having the same economic effect as a transfer or other disposition), then in each such case the Corporation will ensure that proper provision is made so that the obligations of the Corporation set forth in this Agreement will continue in full force, including providing for the assumption of the obligations under this Agreement by any corporation or other entity continuing following an amalgamation, merger, consolidation or winding-up of the Corporation with or into one or more other entities (pursuant to a statutory procedure or otherwise), or by the person or persons acquiring all or substantially all of the properties and assets of the Corporation, as the case may be, in each case without prejudice to the Indemnified Party by written agreement expressly assuming and agreeing to perform this Agreement in the same manner and to the same extent that the Corporation would be required to perform if no amalgamation, consolidation, merger, winding-up or transfer of properties and assets had taken place. In the event of (i) any acquisition (by way of take-over bid, share exchange, purchase of shares or otherwise, and whether in a single transaction or series of related transactions) by any person, or two or more persons acting "jointly or in concert" (within the meaning of that expression as used in applicable securities laws), of beneficial ownership of fifty percent or more of the outstanding voting or equity securities of the Corporation entitled to vote generally in the election of directors of the Corporation; or (ii) a plan of arrangement, amalgamation, merger, consolidation, recapitalization, liquidation, dissolution or other business combination or reorganization or similar corporate transaction, in each case where the Corporation does not cease to exist as a legal entity and is not a continuing or surviving corporation in such transaction, that results in the voting securities of the Corporation outstanding immediately prior to the consummation of such transaction no longer continuing to represent (either by remaining outstanding or by being converted into or exchanged for securities of another entity) at least fifty percent of the combined voting power of the voting securities of the Corporation outstanding immediately after consummation of such transaction, then in each such case the Corporation will ensure that proper provision will be made so that the obligations of the Corporation set forth in this Agreement will continue in full force, including providing that any entity that so acquires voting or equity securities of the Corporation, or any entity which is a surviving corporation or entity in any such arrangement, amalgamation, merger, consolidation, recapitalization, liquidation, dissolution, business combination or reorganization or other transaction, as the case may be, agrees to cause the Corporation to fulfil and honour in all respects all of its obligations under this Agreement and, to the extent necessary, make available to the Corporation, or any successor to the Corporation, any funding required in order for the Corporation, or such successor, to fulfil and honour all obligations under this Agreement in each case without prejudice to the Indemnified Party.

6.04 **Amendments and Waivers**

No amendment to this Agreement will be valid or binding unless set forth in writing and duly executed by the parties hereto. No waiver of any breach of any provision of this Agreement will be effective or binding unless made in writing and signed by the party purporting to give the same and, unless otherwise provided, will be limited to the specific breach waived.

6.05 **Assignment**

This Agreement may be assigned by the Corporation without the consent of the Indemnified Party, provided that such transferee enters into a written agreement with the Indemnified Party to be bound by the provisions of this Agreement in all respects and to the same extent as the Corporation is bound and provided that the Corporation will continue to be bound by all the obligations hereunder as if such assignment had not occurred and perform such obligations to the extent that such transferee fails to do so.

6.06 **Notice**

Any demand, notice or other communication to be given in connection with this Agreement must be given in writing and will be given by personal delivery or by electronic means of communication addressed to the recipient as follows:

To the Corporation:

—

[Fax No.]: —

Attention: —

To the Indemnified Party:

—

[Fax No.]: —

Attention: —

or to such other street address, individual or electronic communication number or address as may be designated by notice given by either party to the other. Any demand, notice or other communication given by personal delivery will be conclusively deemed to have been given on the day of actual delivery thereof and, if given by electronic communication, on the day of transmittal thereof if given during the normal business hours of the recipient and on the Business Day during which such normal business hours next occur if not given during such hours on any day.

6.07 **Remedies Cumulative**

The right and remedies of the parties hereunder are cumulative and are in addition to, and not in substitution for, any other rights and remedies available at law or in equity or otherwise. No single or partial exercise by a party of any right or remedy precludes or otherwise affects the exercise of any other right or remedy to which that party may be entitled.

6.08 **Survival**

The obligations of the Corporation under this Agreement will continue in full force after the Indemnified Party ceases to be a director or officer.

6.09 **Independent Legal Advice**

The Indemnified Party acknowledges that the Corporation has advised the Indemnified Party to obtain independent legal advice with respect to entering into this Agreement, and that the Indemnified Party has either obtained such independent legal advice or has independently determined that the Indemnified Party does not require such advice, and that the Indemnified Party acknowledges and agrees that the Indemnified Party fully understands the nature and effect of this Agreement and is entering into this Agreement with full knowledge of the contents hereof, of the Indemnified Party's own free will and with full capacity to do so.

6.10 **Resignation; Right to Continue to Serve**

Nothing in this Agreement will prevent the Indemnified Party from resigning as a director or officer of the Corporation or any Related Entity or as an individual acting in a similar capacity, or holding a position equivalent to that of a director or officer, of any Related Entity, at any time nor will anything contained in this Agreement be construed as creating any right in favour of the Indemnified Party to continue as an officer or director of the Corporation.

6.11 **Construction as Employment Agreement**

Nothing contained in this Agreement will be construed as giving the Indemnified Party any right to be retained in the employ of the Corporation or any of its Subsidiaries.

6.12 **Governing Law**

This Agreement is governed by and will be construed in accordance with the laws of the Province of British Columbia and the laws of Canada applicable therein.

6.13 **Attornment**

For the purpose of all legal proceedings this Agreement will be deemed to have been performed in the Province of British Columbia and the courts of the Province of British Columbia will have jurisdiction to entertain any action arising under this Agreement. The Corporation and the Indemnified Party each hereby attorns to the jurisdiction of the courts of the Province of British Columbia.

6.14 **Other Rights and Remedies Unaffected**

The indemnification and payment provided in this Agreement shall not derogate from or exclude and shall incorporate any other rights to which the Indemnified Party may be entitled under any provision of the Act or otherwise at law, the Articles or By-Laws of the Corporation, the constating documents of any Related Entity, any applicable policy of insurance, guarantee or third-party indemnity, any vote of shareholders of the Corporation, or otherwise,

both as to matters arising out of his or her capacity as a director or officer of the Corporation, any Related Entity, or as to matters arising out of any other capacity in which the Indemnified Party may act for or on behalf of or be associated with the Corporation or the Related Entity.

6.15 **Obligations Not Affected**

The obligations and rights created under this Agreement will not be affected by any amendment to the Corporation's Articles, By-Laws or other constating documents or any agreement or instrument to which the Indemnified Party is not a party, and will not diminish any other rights which the Indemnified Party now or in the future has against the Corporation or any other person.

6.16 **Subrogation**

In the event of payment under this Agreement, the Corporation will be subrogated to the extent of such payment to all of the rights of recovery of the Indemnified Party, who hereby agrees to execute all documents required and do all acts that may be necessary to secure such rights and to enable the Corporation effectively to bring suit to enforce such rights.

6.17 **Duration of Agreement**

All obligations of the Corporation under this Agreement will continue during the period in which the Indemnified Party is a director or officer of the Corporation or a Related Entity or is serving at the request of the Corporation as a director or officer, or in a similar capacity (including an individual holding a position equivalent to that of director or officer), of a Related Entity and will continue thereafter so long as the Indemnified Party is subject to any Proceeding by reason of his or her former or current capacity at the Corporation or a Related Entity, as the case may be, whether or not he or she is acting in any such capacity at the time any Liability is incurred for which indemnification can be provided under this Agreement.

6.18 **Counterparts**

This Agreement may be executed in any number of counterparts, each of which will be deemed to be an original and all of which taken together will be deemed to constitute one and the same instrument.

6.19 **Severability**

If any provision of this Agreement is determined by any court of competent jurisdiction to be illegal or unenforceable, that provision will be severed from this Agreement and the remaining provisions will continue in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either of the parties.

6.20 **Electronic Execution**

Delivery of an executed signature page to this Agreement by any party by electronic transmission will be as effective as delivery of a manually executed copy of the Agreement by such party.

IN WITNESS WHEREOF the parties have executed this Agreement.

SIGNED, SEALED AND DELIVERED)
in the presence of:)
)
)
)
)
)
)

_____

Witness

_____

Name of Indemnified Party: —

XENON PHARMACEUTICALS INC.

Per: _____

Name:
Title:

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

The Board of Directors of Xenon Pharmaceuticals Inc.

We consent to the use of our audit report dated February 19, 2014, except as to note 18 (b) which is as of October 1, 2014, on the financial statements of Xenon Pharmaceuticals Inc., which comprise the balance sheets as at December 31, 2012 and December 31, 2013, the related statements of operations, comprehensive income (loss), changes in redeemable convertible preferred shares and shareholders' deficit and cash flows for each of the years in the three-year period ended December 31, 2013, and to the reference to our firm under the heading "Experts" in the Form S-1/A filing.

/s/ KPMG LLP
Chartered Accountants

October 6, 2014
Vancouver, Canada