Registration No. 333-

This draft registration statement has not been filed publicly with the Securities and Exchange Commission and all information contained herein remains confidential. As confidentially submitted to the Securities and Exchange Commission on August 16, 2013.

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

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	**PROPOSED MAXIMUM AGGREGATE OFFERING PRICE [(1)]**	**AMOUNT OF REGISTRATION FEE**
Common Shares, no par value per share	$	$

(1) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) under the Securities Act of 1933, as amended. Includes shares that the underwriters have the option to purchase.

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.

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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 , 2013

PRELIMINARY PROSPECTUS

Shares

Xenon Pharmaceuticals Inc.

Common Shares

We are offering 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 $ and $ per share.

We intend to apply 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 12 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]	$	$
Proceeds, before expenses, to us	$	$

(1) The underwriters will also be reimbursed for certain expenses incurred in this offering. See “Underwriting” for details.

Delivery of the common shares purchased in this offering is expected to be made on or about , 2013. We have granted the underwriters an option for a period of 30 days to purchase up to 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 $.

Joint Book-Running Managers

Jefferies **Cowen and Company**

Co-Managers

Wells Fargo Securities **RBC Capital Markets**

Prospectus dated , 2013

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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 , 2013, 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, 2013, the exchange rate for the conversion of Canadian dollars into U.S. dollars was 0.9513, based on the Bank of Canada's noon buying rate for one U.S. dollar. 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, 2013.

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 biopharmaceutical company focused on the development of novel medicines through the application of our proprietary discovery platform, which we refer to as Extreme Genetics. Our product candidates are based on genetic insights derived from our research of families where individuals exhibit severe traits, or phenotypes. By identifying and characterizing the single-gene defects responsible for such severe phenotypes, we gain valuable insights into their function in human biology and their potential as drug targets. Given that these targets are often involved in diseases beyond the rare genetic disorders in which they are first identified, we are developing proprietary product candidates to treat both orphan as well as more prevalent diseases.

Our Extreme Genetics discovery platform has enabled us to develop a pipeline including one approved product, three development-stage product candidates and four preclinical discovery programs. Our platform has also yielded multiple collaborations with leading pharmaceutical companies such as Genentech, Inc., or Genentech, Merck Sharp & Dohme GmbH (formerly known as Merck Sharp & Dohme Research Ltd.), an affiliate of Merck & Co., Inc., or Merck, and Teva Pharmaceutical Industries Ltd., or Teva. These 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.

The following chart summarizes our current product pipeline:

Our Programs

Approved Product

Glybera: Glybera is a gene therapy approved in the European Union, or EU, in November 2012 for the treatment of the orphan lipid disorder lipoprotein lipase deficiency, or LPLD. It is intended to treat LPLD in patients with severe or multiple pancreatitis attacks, despite dietary fat restrictions. Glybera contains a variant of lipoprotein lipase, or LPL, called LPL^{S477X}, which results in reduced triglyceride levels in humans. Glybera was developed by our licensee, uniQure Biopharma B.V., or uniQure. In a clinical trial, a single dose of Glybera was demonstrated to reduce triglycerides by approximately 40% and resulted in a reduction in the incidence of acute pancreatitis over the two-year study period. It is the first product derived from our platform to receive commercial approval and is the first gene therapy to be approved in the EU or North America. 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 Europe and more than a dozen other countries including Brazil, China, Mexico and Russia. uniQure has also publicly disclosed that it is preparing to apply for regulatory approval of this product in the U.S., Canada and other markets.

Product Candidates in Development

XEN402: 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. To select our pain drug target, we discovered that the Nav1.7 protein is deficient in a rare genetic disorder known as congenital indifference to pain, or CIP, a condition where humans cannot feel pain. We have observed evidence of effect for XEN402 in four Phase 2 proof-of-concept clinical trials, including two trials in the orphan disease erythromelalgia, or EM, one trial in postherpetic neuralgia, or PHN, and one trial in dental 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 XEN402. Teva made an upfront payment to us of $41.0 million, and we are eligible to receive potential milestone payments totaling in aggregate up to $335.0 million, the majority of which relate to pre-commercial achievements. If XEN402 is approved, we are also eligible to receive double-digit royalties on net sales worldwide, and we have an option to co-promote products in the U.S. In collaboration with Teva, we are currently developing XEN402 as a topical product to treat the pain associated with EM as well as other, more common forms of pain.

XEN701: XEN701 is a subcutaneously administered antisense oligonucleotide compound designed to inhibit the expression of the protein hepcidin. To select our anemia drug target, we identified mutations in genes underlying a rare disorder known as juvenile hemochromatosis, or JH, a condition of iron overload, or excess. XEN701 is currently in investigational new drug, or IND, enabling safety and toxicology studies and we expect to commence Phase 1 studies during the first half of 2014. Initially, our development strategy will focus on treating the anemia associated with chronic kidney disease or end-stage renal disease in niche populations where the use of erythropoietin stimulating agents, the current standard of care, is subject to a black box warning (the FDA's highest level of warning, indicating that a particular drug may lead to death or serious injury) or is contraindicated.

Selective Inhibitor of Nav1.7 for the Treatment of Pain: 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. 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 inhibitors of Nav1.7 for the treatment of pain. A small-molecule preclinical product candidate was subsequently selected in 2013 for development and is currently in the IND-enabling stage.

Product Candidates in Discovery

We have multiple programs and product candidates in discovery including: (i) selective small-molecule inhibitors of the enzyme SCD1 for acne; (ii) selective small-molecule inhibitors of a target for cardiovascular disease pursuant to a collaboration with Merck; (iii) selective small-molecule sodium channel modulators for Dravet Syndrome, an orphan seizure disorder; and (iv) new pipeline opportunities focused on discovery of novel drug targets for pain.

Our Extreme Genetics Discovery Platform

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 efforts with the advantage of having a greater understanding of the role of the drug target in human disease.

Our Strategy

Our goal is to apply our Extreme Genetics discovery platform to build a sustainable and profitable biopharmaceutical company that discovers, develops and commercializes innovative therapeutics. Our key strategic initiatives include:

- *Discovering Additional Novel Targets.* We are committed to expanding our network of clinical collaborations and access to families with severe phenotypes to identify novel targets for orphan and niche, as well as more prevalent, diseases.

- *Expanding Our Proprietary Pipeline of Orphan and Niche Disease Product Candidates.* We will continue to develop product candidates for orphan and niche diseases. This focus may 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. These benefits may 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 beyond Phase 2 proof-of-concept trials and potentially through commercialization.

- *Developing Product Candidates for More Prevalent Diseases through Pharmaceutical Collaborations.* We plan to continue to partner product candidates for more prevalent diseases with pharmaceutical companies to access additional development and commercial resources, expertise and non-dilutive funding to enable the advancement of a broader and more diverse pipeline.

- *Independently Commercializing Selected Products.* We intend to develop a specialized sales force in circumstances where we expect to be able to cost-effectively commercialize approved products in orphan and niche markets.

Strategic Alliances

We have implemented our business strategy by entering into multiple collaborations with leading pharmaceutical companies that have provided us with significant funding to date and with the potential for future milestone payments and royalty income.

Agreement with uniQure for Glybera

Effective August 2000, we entered into a sublicense and research agreement with Amsterdam Molecular Therapeutics, or AMT, pursuant to which we granted to AMT an exclusive, worldwide sublicense under certain intellectual property controlled by us to develop and commercialize compounds related to the variant of LPL, called LPL^{S447X}. We collaborated with AMT to develop an LPL gene therapy product, Glybera, which contains this variant. Certain of AMT's assets, including the rights to the intellectual property covered by our agreement, were subsequently acquired by uniQure in April 2012. Under the terms of the agreement, we are eligible to receive mid single-digit royalties on net sales by uniQure and its affiliates, and other payments.

In June 2013, uniQure granted Chiesi a sublicense to commercialize Glybera in Europe and more than dozen other countries, including Brazil, China, Mexico and Russia. We are eligible to receive a double-digit percentage of all compensation received by uniQure relating to the technology or products licensed by us.

Agreement with Teva for XEN402

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 XEN402.

Under the terms of the agreement, Teva paid us an upfront fee of $41.0 million. We are collaborating with Teva to further develop XEN402, and Teva is funding all development costs with respect to the licensed products. In addition, we are eligible to receive potential milestone payments totaling up to $335.0 million, the majority of which relate to pre-commercial activities. If XEN402 is approved, we are also eligible to receive double-digit royalties on net sales of products worldwide.

We have an option to a minority co-promotion interest for products incorporating XEN402 in the U.S. Our co-promotion option is exercisable upon the filing of the first New Drug Application, or NDA, with the FDA for a XEN402 product, and we will be obligated to pay an opt-in fee to Teva. If we exercise this option, 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 such product sales in the U.S. that is equal to our percent interest.

Agreement with Isis for XEN701

In November 2010, we entered into a collaboration and license agreement with Isis Pharmaceuticals, Inc., or Isis. Under this agreement, we 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. We collaborated with Isis on research that led to the selection of XEN701 as the first drug to enter development under the collaboration.

In June 2013, we exercised our option and obtained an exclusive license to develop, manufacture and commercialize antisense products under the collaboration that target hepcidin. Upon the achievement of specific development and regulatory events, we are obligated to pay to Isis pre-commercial milestone payments totaling up to $88.0 million and sales-based milestone payments totaling up to $60.0 million. In addition, Isis is eligible to receive royalties in the single-digit range, on net sales of licensed products by us and our affiliates. If we sublicense XEN701 to a third party for development and/or commercialization, then Isis is eligible to receive a percentage of our sublicensing revenue, including milestone payments and royalties we may receive from any sublicensee in lieu of the remaining milestone payments and the royalties described above.

Agreement with Genentech for Selective Nav1.7 Inhibitors

In December 2011, we entered into a collaborative research and license agreement with Genentech 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.

Under the terms of the agreement, Genentech paid us an upfront payment of $10.0 million and we subsequently earned a $5.0 million milestone payment for the selection of a development-stage candidate. In addition, we are eligible to receive pre-commercial and commercial milestone payments with respect to the licensed products totaling up to an additional $621.0 million. We are also eligible to receive royalties based on net sales of the licensed products, which range from single to low double-digit range percentage for small-molecule inhibitors and a single-digit percentage for large-molecule inhibitors of Nav1.7.

Agreement with Merck for Cardiovascular Disease

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. The collaborative research program ended in December 2012.

Under 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 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, 2013, 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 for a product directed to such 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 low double-digit range.

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 substantial revenue from product royalties and may never be profitable.
- 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 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.
- 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.

- We and our collaborators face substantial competition in the markets for our product candidate.
- 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.”

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 completion of this offering;
- the date on which we have, during the previous three-year period, issued more than $1.0 billion in non-convertible debt; and
- the date on which we are deemed to be a “large accelerated filer” under the Securities Exchange Act of 1934, 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, but not all, of the available benefits under the JOBS Act. We 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 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. We may elect to use this extended transition period under the JOBS Act. If we do, our financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies.

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. 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 Biopharma B.V. 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	common shares
Common shares to be outstanding after this offering	common shares (or 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 additional common shares.
Use of proceeds	We estimate that the net proceeds from this offering will be approximately $ million, or approximately $ million if the underwriters exercise in full their option to purchase additional common shares, at an assumed initial public offering price of $ per share (the midpoint of the range set forth on the cover page of this prospectus), after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We currently expect to use the net proceeds from this offering: (1) to fund genetic research, drug discovery and preclinical development activities using our Extreme Genetics discovery platform; (2) to fund our planned development of XEN701; (3) for future success-based milestone payments to current licensors including Isis, should we achieve such milestones; and (4) 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”

The number of common shares to be outstanding after this offering is based on 39,586,986 common shares outstanding as of June 30, 2013 and excludes the following:

- 6,339,591 common shares issuable upon exercise of options outstanding as of June 30, 2013, at a weighted-average exercise price of CAD$0.79 per common share, or $0.75 per common share, as converted; and
- common shares reserved for future issuance under share-based compensation plans, including common shares reserved for issuance under our 2013 Equity Incentive Plan, which will become effective on the day immediately prior to the date of the completion of this offering and any future automatic increase in common shares reserved for issuance under such plan, and 7,373,338 common shares reserved for issuance under our Amended and Restated Stock Option Plan as of June 30, 2013, which shares will be added to the 2013 Equity Incentive Plan upon effectiveness of such plan.

Except as otherwise indicated, this prospectus:

- reflects the conversion of all outstanding preferred shares into an aggregate of 33,029,489 common shares upon the closing of this offering;

- reflects the automatic conversion of 69,356 subscription rights immediately prior to the closing of this offering;
- assumes the filing of the articles of amendment immediately prior to the closing of this offering;
- assumes no exercise by the underwriters of their option to purchase additional common shares;
- reflects a for reverse share split of our common and preferred shares to be effected prior to the closing of this offering; 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 and 2012 from audited financial statements appearing elsewhere in this prospectus. We derived the following statements of operations data for the six months ended June 30, 2012 and 2013 and the balance sheet data as of June 30, 2013 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, 2013 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	2012	2013
			(unaudited)	
	(in thousands, except per share data)			
Statement of Operations Data:				
Revenue:				
Collaboration revenue	$ 6,915	$ 14,300	$ 8,207	$10,985
Royalties	3	8	3	—
	6,918	14,308	8,210	10,985
Operating expenses:				
Research and development	12,237	10,392	4,770	6,939
General and administrative	6,795	7,069	3,561	2,872
Total operating expenses	19,032	17,461	8,331	9,811
Income (loss) from operations	(12,114)	(3,153)	(121)	1,174
Other income (expense):				
Interest income	153	144	56	76
Interest expense	(91)	(93)	(46)	(41)
Foreign exchange gain (loss)	60	(169)	(143)	1,920
Gain (loss) on write-off and disposal of assets	—	(1,030)	(1,197)	11
Net income (loss)	(11,992)	(4,301)	(1,451)	3,140
Net income (loss) attributable to participating securities	—	—	—	(3,140)
Net income (loss) attributable to common shareholders	$ (11,992)	$ (4,301)	$(1,451)	$ —
Net income (loss) per share—basic	$ (1.86)	$ (0.67)	$ (0.23)	$ 0.00
Net income (loss) per share—diluted	$ (1.86)	$ (0.67)	$ (0.23)	$ 0.00
Weighted-average common shares outstanding used in computing basic net income (loss) per share	6,433	6,452	6,443	6,478
Weighted-average common shares outstanding used in computing diluted net income (loss) per share	6,433	6,452	6,443	6,478
Pro forma net income (loss) per share—basic (unaudited) (1)		$ (0.11)		$ 0.08
Pro forma net income (loss) per share—diluted (unaudited) (1)		$ (0.11)		$ 0.07
Weighted-average common shares outstanding used in computing the proforma net income (loss) per share—basic (unaudited) (1)		39,536		39,577
Weighted-average common shares outstanding used in computing the proforma net income (loss) per share—diluted (unaudited) (1)		39,536		41,949

	AS OF JUNE 30, 2013	
	ACTUAL	PRO FORMA AS ADJUSTED[2] (unaudited)
	(In thousands)	
Balance Sheet Data:		
Cash, cash equivalents and marketable securities	$ 49,812	$
Working capital	33,333	
Total assets	53,458	
Redeemable convertible preferred shares	102,488	—
Total shareholders' deficit	(87,195)	

(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 and (ii) the conversion of all outstanding subscription rights, in each case into our common shares, as if the conversions had occurred at the beginning of the period presented.

(2) Reflects, on a pro forma basis, the automatic conversion described in footnote (1) and, on an as adjusted basis, the sale and issuance by us of common shares hereunder at an assumed initial price to public of $ per share, the midpoint of the range set forth on the cover of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses. Each $1.00 increase (decrease) in the assumed initial price to public of $ per share, would increase (decrease) each of cash and cash equivalents, working capital, total assets and total shareholders' deficit by approximately $ 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. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of in the number of shares offered by us would increase (decrease) each of cash and cash equivalents, working capital, total assets and total shareholders' deficit by approximately $ million, assuming that the assumed initial price to public remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses. The pro forma as adjusted information discussed above is illustrative only and will adjust based on the actual initial price to public 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 six months ended June 30, 2013, we have recorded net losses in each reporting period since inception in 1996 and do not expect to have sustained profitability for the foreseeable future. We have incurred net losses of $12.0 million and $4.3 million for the years ended December 31, 2011 and 2012. As of June 30, 2013, we had an accumulated deficit of $125.6 million.

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 significant 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 Isis Pharmaceuticals, Inc., or Isis, 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 substantial revenue from product royalties and may never be 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. We have not generated product royalty revenue from product sales to date, 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. Even if we achieve profitability in the future, 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, 2013, we incurred approximately $6.9 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 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 XEN402, 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 actual funds we will 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, based upon our anticipated operating expenditures, we expect that the net proceeds from this offering, research funding that we expect to receive under our existing collaborations and our existing cash and cash equivalents will be sufficient to fund our current operations for 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.

Approximately 36% of our cash and cash equivalents as of June 30, 2013 were 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 our 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 XEN402, XEN701 and our selective Nav1.7 inhibitor and compounds in our discovery pipeline, are in varying stages of development and will require substantial clinical development, testing and regulatory approval prior to commercialization. We currently have two announced product candidates that are, subject to the outcome of current investigational new drug, or IND, enabling safety studies, anticipated to enter Phase 1 clinical trials in the next two years. 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 effected and a decline of our common share price could result.

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 Europe 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 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 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, 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 EM.

Our competitors currently market well-known drugs and treatments for anemia, including erythropoieten stimulating agents, or ESAs, such as epogen, and intravenous iron therapy. We are aware of clinical-stage development programs at several major pharmaceutical and biotechnology companies targeting hepcidin for the treatment of cancer associated with anemia, including Eli Lilly and Company and NOXXON Pharma AG. Other companies' clinical-stage development programs do not directly target hepcidin such as prolyl hydroxylase inhibitors and soluble hemojuvelin for the treatment of CKD and ESRD, including Astellas Pharma Inc., AstraZeneca plc, FerruMax Pharmaceuticals, Inc., FibroGen, Inc. and GlaxoSmithKline plc. Another clinical-stage therapy aims to treat anemia by administering iron via dialysate. We are not aware of any drugs or therapies currently approved for treating anemia by inhibiting the production of human hepcidin at the transcriptional level.

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, 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 lipoprotein lipase deficiency, or 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, and Teva Pharmaceutical Industries Ltd., or Teva, is responsible for the on-going clinical development of XEN402. 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 XEN402, XEN701 and our selective Nav1.7 inhibitor, 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 product candidates XEN402, XEN701 and our selective Nav1.7 inhibitor. 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 have recently hired a chief financial officer who is scheduled to join us full-time by November 2013. 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. Bridger, our Executive Vice President of Research and Development, is a part-time employee who works for us on a three-days-a-week basis. Drs. Pimstone and Goldberg each devote a small amount of their time to clinical work outside of their duties at our company, conducting, on average, 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; Dr. Bridger, our Executive Vice President, Research and Development; 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 will adopt a code of conduct applicable to all of our employees, which will be effective as of the consummation of this offering, 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 XEN402, 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, or political instability 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 ending December 31, 2012 and we do not expect to be a PFIC following this offering and for the taxable year ending December 31, 2013.

If we are a PFIC for 2013 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 an 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 a New Drug Application, or 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, or DSMB, 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 XEN402, XEN701 and selective Nav1.7 inhibitor product candidates for treatment of pain and anemia 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 XEN402 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 between 1:500,000 and 1:1,000,000 and the prevalence of primary erythromelalgia, or EM, to be approximately 43,000 patients in the U.S. 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. XEN402 has received orphan drug designation for the treatment of EM by the FDA, and we, in conjunction with our collaborator, Teva, intend to file a corresponding application for regulatory exclusivity in the EU. If we seek orphan drug designations for other indications or in other jurisdictions, such as for XEN402 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 EM pain, one using a topical formulation and the other an oral formulation of XEN402, 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 effect 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 the FDA, we may never obtain approval for our product candidates outside of the U.S., which would limit our market opportunities and adversely affect our business.

Sales of our approved products outside of the U.S. will be subject to foreign regulatory requirements governing clinical trials and marketing approval, and we plan to seek regulatory approval to commercialize our product candidates both in the 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 providers 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 EEA 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 XEN402 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 good clinical practices, or GCP, 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;
- injunctions or the imposition of civil or criminal penalties; and

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 between 1:500,000 and 1:1,000,000 and the prevalence of EM to be approximately 43,000 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 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 beginning in September 2014;

- a new 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 XEN402, and if our relationship is not successful or is terminated, we may not be able to effectively develop and/or commercialize XEN402, which would have a material adverse effect on our business.

We depend on Teva to collaborate with us to develop and globally commercialize XEN402. Under the agreement, Teva controls all decision-making with respect to the clinical development and commercialization for XEN402. As a result of our dependence on Teva, the eventual success or commercial viability of XEN402 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 XEN402;
- 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 XEN402;
- 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 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, XEN402, XEN701 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 US. 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. The patent portfolio for XEN701 is in-licensed from Isis. 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.

Recent patent reform legislation and 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 developed and implemented 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, and in particular, the first to file provisions, were enacted March 16, 2013. The Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our 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 A*ssociation 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 US 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 US 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. 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 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 beginning in 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 we may not carry sufficient business interruption insurance to compensate us for 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 common shares, or % of our common shares, 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, our executive officers, directors and principal shareholders will maintain the ability to control all matters submitted to shareholders for approval.

Upon the closing of this offering, our executive officers and directors and shareholders who owned more than 5% of our outstanding common shares before this offering will, in the aggregate, own or control shares representing approximately % of our outstanding common shares or % if investment entities affiliated with certain of our principal shareholders and certain of our other existing shareholders purchase a number of common shares equal to that for which they have expressed an interest in purchasing, of which % will be owned or controlled by our executive officers. As a result, if these shareholders were to choose to act together, they would be able to control all matters submitted to our shareholders for approval, as well as our management and affairs. For example, these persons, if they choose to act together, would control the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. 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 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 or our by-laws 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 Canada Business Corporations Act 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 Canada Business Corporations Act 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 Canada Business Corporations Act 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 Canada Business Corporations Act and Delaware General Corporation Law 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, amendments to our articles or our by-laws) the Canada Business Corporations Act generally requires a two-thirds majority vote by shareholders, whereas Delaware General Corporation Law generally only requires a majority vote; (ii) quorum for shareholders meetings under the Canada Business Corporations Act can be set by a corporation's by-laws, and under our by-laws, such quorum only requires the acceptance of one person representing (in person or by proxy) at least 10% of the issued shares, whereas under Delaware General Corporation Law, quorum requires a minimum of one-third of the shares entitled to vote to be present; and (iii) under the Canada Business Corporations Act a holder of 5% or more of our common shares can requisition a special meeting of shareholders at

which matters that can be voted on at our annual meeting can be considered, whereas such right does not exist under the Delaware General Corporation Law. 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 NASDAQ, on which we intend to apply to have our common shares listed, 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 British Columbia Securities Commission 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 a full-time chief financial officer who is scheduled to join us full time in November 2013. 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, beginning January 1, 2014, 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 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. We may elect to use this extended transition period under the JOBS Act. If we do, our financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies, which may make our common shares less attractive to investors.

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 of the Sarbanes-Oxley Act, 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, 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, you will incur immediate and substantial dilution in the book value of your shares and 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 additional dilution and could cause our share price to fall.

Investors purchasing common shares in this offering will pay a price per common share that substantially exceeds the net tangible book value per common share as of June 30, 2013. Net tangible book value is our tangible assets after subtracting our liabilities. As a result, investors purchasing common shares in this offering will incur immediate dilution of $ per common share, based on the initial public offering price of $ per common share. Further, investors purchasing common shares in this offering will contribute approximately % of the total amount invested by shareholders since our inception, but will own only approximately % of the common shares outstanding after giving effect to this offering.

This dilution is due to our investors who purchased shares prior to this offering having paid substantially less than the price offered to the public in this offering when they purchased their shares. In addition, as of June 30, 2013, options to purchase 6,339,591 of our common shares at a weighted-average exercise price of $0.79 per common share were outstanding. The exercise of any of these options would result in additional dilution. As a result of the dilution to investors purchasing common shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. 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.

For a further description of the dilution that you will experience immediately after this offering, see "Dilution."

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

Our management team will have broad discretion in the application of the net proceeds from this offering 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) continue pre-clinical development of product candidates identified using our Extreme Genetics discovery platform; (2) initial IND-enabling studies and clinical development through Phase 2 trials of XEN701, including relevant milestone payments to Isis; (3) fund the development of a sales, marketing and distribution infrastructure to support our co-promotion option with Teva; and (4) 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. 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 intend to apply to list our common shares on NASDAQ. 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, including for EM or other 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 XEN402 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;

- 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 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 do not protect any forward-looking statements that we make in connection with this offering.

This prospectus contains market data and industry forecasts that were obtained from industry publications. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. We have not independently verified any third-party information. While we believe the market position, market opportunity and market size information included in this prospectus is generally reliable, such information is inherently imprecise.

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, 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, and you are cautioned not to give undue weight to such estimates.

While we believe the market position, market opportunity and market size information included in this prospectus is generally reliable, such information is inherently imprecise. 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 will be approximately $ million, or approximately $ million if the underwriters exercise their option to purchase additional common shares in full, based upon an assumed initial public offering price of $ per common share, the mid-point of the estimated price range on the cover page of this prospectus, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Each $1.00 increase (decrease) in the assumed initial public offering price of $ per common share would increase (decrease) the net proceeds to us from this offering by approximately $ 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 one million common shares in the number of common shares offered by us would increase (decrease) the net proceeds to us from this offering by approximately $ million, assuming that the assumed initial public offering price remains the same, and after deducting the 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 uses 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 as follows:

- approximately $ million to fund genetic research, drug discovery and preclinical development activities using our Extreme Genetics discovery platform;
- approximately $ million to fund our planned development of XEN701;
- approximately $ million for future success-based milestone payments to current licensors including Isis, should we achieve such milestones; 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 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, 2013:

- on an actual basis;
- on a pro forma basis to reflect (1) the conversion of all outstanding preferred shares into an aggregate of 33,029,489 common shares upon the closing of this offering; (2) the automatic conversion of all subscription rights outstanding immediately prior to the closing of this offering into an aggregate of 69,356 common shares; and (3) a for reverse share split of our common and preferred shares to be effected prior to the closing of this offering; and
- on a pro forma as adjusted basis, to further reflect the sale and issuance by us of common shares in this offering at an assumed initial price to public of $ per share, the mid-point of the range reflected on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses.

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, 2013		
	ACTUAL	PRO FORMA	PRO FORMA AS ADJUSTED [1]
	(unaudited) (in thousands, except per share amounts)		
Redeemable convertible preferred shares, without par value; issuable in series, 32,102,673 authorized, 31,437,274 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:			
Common shares, without par value, unlimited common shares authorized, 6,488,141 common shares issued and outstanding, actual; unlimited common shares authorized, common shares issued and outstanding, pro forma; unlimited common shares authorized, common shares issued and outstanding, pro forma as adjusted	5,986		
Additional paid-in capital	28,772		
Accumulated deficit	(124,483)		
Accumulated comprehensive income	3,409		
Total shareholders’ deficit	(86,316)		
Total capitalization	$ 16,172	$	$

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

The outstanding share information in the table above excludes as of June 30, 2013:

- 6,339,591 common shares issuable upon exercise of options outstanding as of June 30, 2013, at a weighted-average exercise price of CAD$0.79 per share, or $0.75 per share, as converted; and
- common shares reserved for future issuance under share-based compensation plans, including common shares reserved for issuance under our 2013 Equity Incentive Plan, which will become effective on the day immediately prior to the date of the completion of this offering, and any future automatic increase in common shares reserved for issuance under such plan, and 7,373,338 common shares reserved for issuance under our Amended and Restated Stock Option Plan as of June 30, 2013, which shares will be added to the 2013 Equity Incentive Plan upon effectiveness of 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, 2013 was $15.3 million, or $2.36 per 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 33,029,489 common shares immediately prior to the completion of this offering; (2) the automatic conversion into an aggregate of 69,356 common shares of all subscription rights outstanding immediately prior to the closing of this offering; (3) the issuance of common shares in this offering; and (4) receipt of the net proceeds from the sale of common shares in this offering at an assumed initial price to public of $ per common share (the midpoint of the price range set forth on the cover of this prospectus), after deducting underwriting discounts and commissions and estimated offering expenses, the pro forma as adjusted net tangible book value as of June 30, 2013 would have been approximately $ million, or $ per common share. This represents an immediate increase in pro forma as adjusted net tangible book value of $ per common share to existing shareholders and an immediate dilution of $ 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		$
Historical net tangible book value per common share as of June 30, 2013	$2.36	
Decrease per common share attributable to conversion of redeemable convertible preferred shares		
Decrease per common share attributable to the conversion of subscription rights		
Pro forma net tangible book deficit per common share before this offering		
Increase in net tangible book value per common share attributable to investors participating in this offering		
Pro forma as adjusted net tangible book value per common share, as adjusted to give effect to this offering		
Pro forma dilution per common share to investors participating in this offering		$

Each $1.00 increase (decrease) in the assumed initial price to public of $ per common share would increase (decrease) the pro forma as adjusted net tangible book value by approximately $ million, or approximately $ per common share, and increase (decrease) the pro forma dilution per share to investors in this offering by approximately $ per common share, 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 underwriting discounts and commissions and estimated offering expenses. We may also increase or decrease the number of common shares we are offering. An increase of one million in the number of common shares offered by us would increase the pro forma as adjusted net tangible book value by approximately $, or $ per common share, and the pro forma dilution per common share to investors in this offering would be $ per common share, assuming that the assumed initial price to public remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses. Similarly, a decrease of one million common shares in the number of common shares offered by us would decrease the pro forma as adjusted net tangible book value by approximately $ million, or $ per common share, and the pro forma dilution per common share to investors in this offering would be $ per common share, assuming that the assumed initial price to public remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses. The pro forma as adjusted information discussed above is illustrative only and will adjust based on the actual initial price to public and other terms of this offering determined at pricing.

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

The following table summarizes, on a pro forma basis as of June 30, 2013, 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 at an assumed initial price to public of $ per share, before deducting underwriting discounts and commissions and estimated offering expenses.

	COMMON SHARES PURCHASED		TOTAL CONSIDERATION		WEIGHTED-AVERAGE PRICE PER COMMON SHARE
	NUMBER	PERCENT	AMOUNT	PERCENT	
Existing shareholders before this offering		%	$	%	$
Investors participating in this offering					
Total		%	$	%	

Each $1.00 increase (decrease) in the assumed initial price to public of $ per common share would increase (decrease) total consideration paid by new investors by approximately $ 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 underwriting discounts and commissions and estimated offering expenses. We may also increase or decrease the number of common shares we are offering. An increase (decrease) of in the number of common shares offered by us would increase (decrease) total consideration paid by new investors by $ million, assuming that the assumed initial price to public remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses.

The number of common shares to be outstanding following this offering is based on 39,586,986 common shares outstanding as of June 30, 2013, giving effect to the conversion of all outstanding convertible preferred shares into an aggregate of 33,029,489 common shares immediately prior to the closing of this offering and all outstanding subscription rights into an aggregate of 69,356 common shares upon the closing of this offering and reverse share split. The outstanding share information in the table above excludes as of June 30, 2013:

- 6,339,591 common shares issuable upon exercise of options outstanding as of June 30, 2013, at a weighted-average exercise price of CAD$0.79 per common share, or $0.75 per common share, as converted;
- common shares reserved for future issuance under share-based compensation plans, including common shares reserved for issuance under our 2013 Equity Incentive Plan, which will become effective on the day immediately prior to the date of the completion of this offering, and any future automatic increase in common shares reserved for issuance under such plan; and
- 7,373,338 common shares reserved for issuance under our Amended and Restated Stock Option Plan as of June 30, 2013, which shares will be added to the 2013 Equity Incentive Plan upon effectiveness of 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 and 2012 and the balance sheet data as of December 31, 2011 and 2012 from our audited financial statements included elsewhere in this prospectus. The selected statement of operations data for the six months ended June 30, 2012 and 2013 and the balance sheet data as of June 30, 2013 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. 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, 2013 are not necessarily indicative of results to be expected for the full year ended December 31, 2013. 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 and unaudited interim financial statements have been prepared in U.S. dollars and in accordance with U.S. GAAP.

	YEAR ENDED DECEMBER 31,		SIX MONTHS ENDED JUNE 30,	
	2011	2012	2012	2013
			(unaudited)	
	(in thousands, except per share data)			
Statement of Operations Data:				
Revenue:				
Collaboration revenue	$ 6,915	$ 14,300	$ 8,207	$10,985
Royalties	3	8	3	—
	6,918	14,308	8,210	10,985
Operating expenses:				
Research and development	12,237	10,392	4,770	6,939
General and administrative	6,795	7,069	3,561	2,872
Total operating expenses	19,032	17,461	8,331	9,811
Income (loss) from operations	(12,114)	(3,153)	(121)	1,174
Other income (expense):				
Interest income	153	144	56	76
Interest expense	(91)	(93)	(46)	(41)
Foreign exchange gain (loss)	60	(169)	(143)	1,920
Gain (loss) on write-off and disposal of assets	—	(1,030)	(1,197)	11
Net income (loss)	(11,992)	(4,301)	(1,451)	3,140
Net income (loss) attributable to participating securities	—	—	—	(3,140)
Net income (loss) attributable to common shareholders	$ (11,992)	$ (4,301)	$(1,451)	$ —
Net income (loss) per share—basic [1]	$ (1.86)	$ (0.67)	$ (0.23)	$ 0.00
Net income (loss) per share—diluted [1]	$ (1.86)	$ (0.67)	$ (0.23)	$ 0.00
Weighted-average common shares outstanding used in computing basic net income (loss) per share [1]	6,433	6,452	6,443	6,478
Weighted-average common shares outstanding used in computing diluted net income (loss) per share [1]	6,433	6,452	6,443	6,478
Pro forma net income (loss) per share—basic (unaudited) [2]		$ (0.11)		$ 0.08
Pro forma net income (loss) per share—diluted (unaudited) [2]		$ (0.11)		$ 0.07
Weighted-average common shares outstanding used in computing the proforma net income (loss) per share—basic (unaudited) [2]		39,536		39,577
Weighted-average common shares outstanding used in computing the proforma net income (loss) per share—diluted (unaudited) [2]		39,536		41,949

	AS OF DECEMBER 31,		AS OF JUNE 30,
	2011	2012	2013
		(in thousands)	(unaudited)
Balance Sheet Data:			
Cash, cash equivalents and marketable securities	$ 14,924	$ 60,162	$ 49,812
Working capital	20,536	41,506	33,333
Total assets	30,465	63,305	53,458
Note payable	1,586	1,665	—
Redeemable convertible preferred shares	102,488	102,488	102,488
Total shareholders' deficit	(86,316)	(89,865)	(87,195)

(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 and (ii) the conversion of all outstanding subscription rights, in each case into our common shares, as if the conversions had occurred at the beginning of the period presented.

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 biopharmaceutical company focused on the development of novel medicines through the application of our proprietary discovery platform, which we refer to as Extreme Genetics. Our product candidates are based on genetic insights derived from our research of families where individuals exhibit severe traits, or phenotypes. By identifying and characterizing the single-gene defects responsible for such severe phenotypes, we gain valuable insights into their function in human biology and their potential as drug targets. Given that these targets are often involved in diseases beyond the rare genetic disorders in which they are first identified, we are developing proprietary product candidates to treat both orphan as well as more prevalent diseases.

We were incorporated in 1996 under the British Columbia Business Corporations Act and, federally, in 2000 under the Canada Business Corporation Act. We commenced active operations in 1999 and, to date, have devoted substantially all of our resources to the discovery and development of novel medicines through the application of our proprietary Extreme Genetics discovery platform. We initially focused on genetic discovery research, and subsequently expanded our efforts into drug discovery and preclinical and clinical development. To support our development activities, we also engage in supporting activities such as manufacturing and formulation development.

Our current pipeline includes the following product, product candidates and discovery-stage programs:

- Glybera, a gene therapy product approved in the European Union, or EU, for the treatment of the orphan lipid disorder LPLD, which product is licensed to uniQure Biopharma B.V., or uniQure;
- XEN402, a small-molecule inhibitor of the sodium channel Nav1.7 and other sodium channels for the treatment of pain, which is being funded by, and developed in collaboration with Teva Pharmaceuticals, Inc., or Teva, through its subsidiary, Ivax International GmbH, or Ivax;
- XEN701, a subcutaneously administered antisense oligonucleotide compound for the treatment of anemia of chronic disease, which we are funding and developing internally pursuant to a license from Isis Pharmaceuticals, Inc., or Isis;
- A selective Nav1.7 inhibitor for the treatment of pain, which is being funded by and developed in collaboration with Genentech, Inc., or Genetech, and its affiliate, F. Hoffmann-La Roche Ltd, or Roche; and
- Four discovery-stage programs including (i) selective small-molecule inhibitors of the enzyme SCD1 for acne, (ii) selective small-molecule inhibitors of a target for cardiovascular disease which is partnered with Merck Sharp & Dohme GmbH (formerly known as Merck Sharpe & Dohme Research Ltd.), an affiliate of Merck & Co., Inc., or Merck, (iii) selective small-molecule sodium channel modulators for Dravet Syndrome, an orphan seizure disorder, and (iv) new pipeline opportunities focused on discovery of novel drug targets for pain.

In keeping with our business strategy and as noted above, we have entered into multiple collaborations with pharmaceutical collaborators, including Genentech, Merck and Teva. These collaborations have generated in aggregate over $140.0 million in non-equity funding through June 30, 2013. This includes approximately $70.0 million in upfront payments, $20.0 million in milestone payments and option fees, and $50.0 million in research and development funding. We are eligible to receive more than $1.0 billion of research, development, regulatory and sales-based milestone payments, as well as royalties on net product sales.

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, 2013, we have received an aggregate of approximately $262.0 million to fund our operations, of which approximately $140.0 million was non-equity funding pursuant to collaboration and license agreements, approximately $17.0 million was pursuant to government funding, and approximately $105.0 was pursuant to the sale of our preferred shares, including approximately $28.0 million related to share sales to collaborators. For 2011 and 2012 and the six months ended June 30, 2013, we recognized revenue for an aggregate of approximately $7.0 million, $14.0 million and $11.0 million, respectively, related to funding from our collaborators.

Though our revenue from our collaboration and license agreements has resulted in net income for the six-months ended June 30, 2013 of $3.1 million, 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 $87.2 million as of June 30, 2013, from expenses incurred in connection with our research programs and from general and administrative costs associated with our operations.

We have not generated substantial royalties 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 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. 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 Amsterdam Molecular Therapeutics, or AMT, pursuant to which we granted to AMT an exclusive, worldwide sublicense under certain intellectual property controlled by us to develop and commercialize compounds related to the variant of LPL, called LPL^{S447X}. We collaborated with AMT to develop an LPL gene therapy product, Glybera, which contains this variant. Certain of AMT's assets, including the rights to the intellectual property covered by our agreement, were subsequently acquired by uniQure in April 2012. Under the terms of the agreement, we are eligible to receive mid single-digit royalties on net sales by uniQure and its affiliates and other payments. 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 Europe and more than a dozen other countries including Brazil, China, Mexico and Russia. We are eligible to receive a double-digit percentage of all compensation received by uniQure relating to the technology or products licensed by us.

Teva. 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 certain products, including XEN402. Under the terms of the agreement, Teva paid us an upfront fee of $41.0 million and is funding all

development costs with respect to the products licensed under the agreement. In addition, we are eligible to receive potential milestone payments totaling in aggregate up to $335.0 million, the majority of which relate to pre-commercial activities. If approved, we are also eligible to receive double digit royalties on net sales of the licensed products.

We have an option to a minority co-promotion interest for products incorporating XEN402 in the U.S. Our co-promotion option is exercisable upon the filing of the first New Drug Application, or NDA, for a XEN402 product with the FDA and we will be obligated to pay an opt-in fee to Teva, which 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, 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 such product sales in the U.S. that is equal to our percent interest of detailing activities and co-promotion expenses.

Genentech. We entered into a collaborative research and license agreement with Genentech in December 2011, to discover and develop molecules that selectively inhibit the Nav1.7 sodium channel for the potential treatment of pain. Under the terms of the agreement, Genentech paid us an upfront fee of $10.0 million and we have subsequently earned a $5.0 million milestone payment. As of June 30, 2013, we were eligible to receive further pre-commercial and commercial milestone payments with respect to the licensed products totaling in aggregate up to $626.0 million. Genentech is also funding certain of our FTEs performing the research collaboration plan. We are also eligible to receive royalties based on net sales of the licensed products, which range from single to low double-digit range percentage for small-molecule inhibitors and a single-digit percentage for large-molecule inhibitors of Nav1.7.

Merck. 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 exercised its option to obtain an exclusive license to cardiovascular target and compound inhibitors that were discovered during the collaboration research program, which program ended in December 2012.

As of June 30, 2013, we had received milestone payments and an option fee from Merck totaling $9.0 million and we are eligible for further research, development and regulatory milestone payments of up to $64.0 million, or as much as $86.5 million if we exercise our option to co-fund the Phase 1 and Phase 2 clinical trials.

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 terminates in September 2013.

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

	YEAR ENDED DECEMBER 31,		SIX MONTHS ENDED JUNE 30,	
	2011	2012	2012	2013
		(in thousands)	(unaudited)	
uniQure:				
Milestone payment	—	$ 198	—	—
Teva:				
Recognition of upfront payment	—	927	—	$ 6,607
Research funding	—	—	—	294
Genentech:				
Recognition of upfront payment	$ 94	3,431	$1,685	1,659
Research funding	93	3,517	1,647	2,257
Merck:				
Recognition of initial milestone payment	2,145	1,060	1,054	—
Option fee	—	2,060	2,047	—
Research funding	3,206	2,442	1,688	—
Milestone payment	1,038	—	—	—
Genome BC:				
Research funding	339	665	86	168
Total collaboration revenue	$ 6,915	$ 14,300	$8,207	$10,985

Through June 30, 2013, we had received upfront fees and milestone payments totaling CAD$575,000, pursuant to our agreement with uniQure. We are eligible to receive certain additional milestone payments of approximately CAD$200,000 for Glybera and CAD$600,000 for each subsequent product, if any, developed pursuant to the agreement.

Under 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 one 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.

Under the terms of our 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 one 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.

Under 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 are recognizing the initial milestone payment of $5.0 million as revenue ratably over the expected period of research performance of pre-commercial activities, which is 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 full-time employees 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 and 2012, and June 30, 2013:

	DECEMBER 31,		JUNE 30,
	2011	2012	2013 (unaudited)
		(in thousands)	
Teva	—	$ 39,907	$ 31,388
Genentech	$ 9,949	6,745	4,782
Merck	1,155	—	—
Total deferred revenue	$ 11,104	$ 46,652	$ 36,170

We expect such deferred revenue remaining as of June 30, 2013 to be recognized as revenue in the applicable period during the three fiscal years ending December 31, 2015 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 and 2012, respectively and for the six months ended June 30, 2012 and 2013:

	YEAR ENDED DECEMBER 31,		SIX MONTHS ENDED JUNE 30,	
	2011	2012	2012	2013
		(in thousands)	(unaudited)	
Research and development	$ 12,237	$ 10,392	$ 4,770	$ 6,939
General and administrative	6,795	7,069	3,561	2,872
Total operating expenses	$ 19,032	$ 17,461	$ 8,331	$ 9,811

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 product candidate XEN701 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 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 XEN402 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 low level of cash and investment balances and low interest earned on such balances. We anticipate that our interest income will increase in the future due to higher cash and investment balances than existed previously as a result of the upfront payment of $41.0 million received from Teva in December 2012 and the receipt of the anticipated net cash proceeds from this offering.

Interest Expense. Interest expense consists of interest accrued on the note payable held by Isis Pharmaceuticals, Inc., or Isis, related to our collaboration agreement for XEN701. As we have 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.

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 agreements.

Under these collaboration agreements, we may receive non-refundable upfront payments, funding for research and development services, milestones, other contingent payments and royalties. In addition to receiving upfront payments, we may also be eligible to receive research funding, milestone and other contingent payments 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 2011, 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.

Foreign Currency

Reporting Currency

For presentation purposes, our assets and liabilities are translated to U.S. dollars at exchange rates at the reporting date. The income and expenses are translated to U.S. dollars at the average exchange rate for the period in which the transaction arose. Equity transactions are translated at the spot exchange rates on which the transactions occur. Exchange differences arising are recognized in a separate component of equity titled accumulated other comprehensive loss. The financial statements have been presented in a currency other than our functional currency of the Canadian dollar, as management has determined that the U.S. dollar is the common currency in which our peers, being international drug and pharmaceutical companies, present their financial statements.

Transactions and Balances

Foreign currency transactions are translated into the Canadian functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of foreign currency transactions and from the re-measurement of monetary assets and liabilities denominated in currencies other than our functional currency are recognized in the other income (expense).

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.

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 service 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 become liquid. 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	2012	2013
			(unaudited)	
Risk-free interest rate	2.36%	1.14%	1.15%	1.03%
Expected term (in years)	6.2	6.2	6.2	6.2
Expected volatility	70%	70%	70%	70%
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, or our Board, has 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 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, 2012 and June 30, 2013, 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, 2012	610,750	0.77	0.76	0.76
January 7, 2012	7,000	0.77	0.75	0.75
March 8, 2012	2,000	0.77	0.78	0.78
March 19, 2012	500	0.77	0.78	0.78
April 1, 2012	10,000	0.77	0.77	0.77
April 29, 2012	10,000	0.77	0.79	0.79
May 16, 2012	1,000	0.77	0.76	0.76
July 1, 2012	10,000	0.77	0.76	0.76
August 20, 2012	2,500	0.77	0.78	0.78
September 17, 2012	7,500	0.77	0.79	0.79
September 24, 2012	50,000	0.55	0.56	0.56
October 29, 2012	15,000	0.55	0.55	0.55
November 5, 2012	2,000	0.55	0.55	0.55
December 14, 2012	1,000	0.55	0.56	0.56
December 21, 2012	250	0.55	0.55	0.55
January 1, 2013	823,400	0.55	0.55	1.07
January 2, 2013	1,500	0.55	0.55	1.07
January 7, 2013	500	0.55	0.56	1.07
January 14, 2013	200,000	0.55	0.56	1.07
January 28, 2013	3,000	0.55	0.55	1.07
February 10, 2013	3,000	0.55	0.55	1.07
February 11, 2013	5,000	0.55	0.55	1.07
March 10, 2013	150,000	0.55	0.54	1.07
April 1, 2013	750	0.55	0.54	1.91
April 25, 2013	20,000	0.55	0.54	1.91
April 28, 2013	5,000	0.55	0.54	1.91
June 16, 2013	2,000	0.55	0.54	1.91

The exercise prices of our options are denominated in Canadian dollars. 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.

With respect to the January 1, 2012 stock options grants, our Board set the option exercise price with reference to its assessment of the market price, as such term is defined in our Amended and Restated Stock Option Plan, of our common shares. Our Board had previously received and considered an internally-prepared valuation report presented to the Committee. Our Board determined that the valuation provided for in the report represented the Company's market value as of January 1, 2012, the date of grant, CAD $0.77 per common share. On January 9, 2012, our Board concluded that this price was appropriate as of January 1, 2012, the date of grant of the options.

From January 2012 through September 24, 2012, our Board determined that there had been no material change in overall market conditions generally and the biotechnology sector in particular. Our Board further determined that we had not experienced a material change in the market price of our common shares. Among the reasons for this conclusion were the following:

- the Genentech collaboration, which was an early-stage discovery program that we had entered into in December 2011, had not materially progressed;

- we did not materially progress our product candidates;
- we did not raise any additional equity through private placements and our cash balances generally continued to decline; and
- we had no plans for an initial public offering, or IPO, in the near term because we did not believe that the public markets presented a favorable environment at the time for an early-stage biotechnology company such as ours.

In September 2012, we prepared an internal valuation report by estimating our enterprise value using a comparable group of public companies. We considered an average of enterprise values and metrics of a multiple of book value to enterprise value for the comparable companies based on their published financial statements as of June 30, 2012. The average metric of multiple of book value to enterprise value was applied to our book value, and a common share value was then computed by dividing the gross equity value, less the estimated amount to redeem all outstanding preferred shares, by the number of common shares outstanding. The Committee and our Board considered this valuation together with management input and other factors in making a determination of the common share valuation as of September 24, 2012. Our Board determined that the market price as of the date of the valuation was CAD$0.55.

Among the factors considered in reaching this determination were the fact that some of our clinical assets had not advanced since the date of the Company's last valuation and the fact that the collaborative research component of one of the Company's collaboration agreements in place at the time of the last valuation was winding down and due to expire with the loss of concommitant revenue.

In December 2012, we entered into a collaboration agreement with Teva for our lead program, XEN402, based on the results of four Phase 2 clinical trials. Under the Teva agreement, we received an upfront license fee of $41.0 million which substantially improved our financial position. In addition, several life sciences public offerings were completed in the fourth quarter of 2012 as market conditions improved for biotechnology companies.

The fair value determinations as of January 1, 2013 and June 30, 2013 were determined retrospectively by the Committee and our Board 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 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 determined the fair value with reference to a valuation report which was based on a blend of the income and market approach. 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 concluded that our common shares had a fair value of $1.07 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 XEN402;
- our decision to exercise our license option on XEN701 and commence IND-enabling studies for this product candidate;
- 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. 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, together with management input determined that the fair value of our common shares had increased to $1.91 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 $1.91 value for computation of stock-based compensation expense to our option grants between April 1, 2013 and June 30, 2013.

During the quarter ended June 30, 2013, we granted 27,750 options granted resulting in share-based compensation expense of $2,448.

Based on the assumed initial public offering price of $ per share, which is the midpoint of the estimated price range set forth on the cover page of this prospectus, the aggregate intrinsic value of stock options outstanding as of June 30, 2013 was $ million, of which $ million relate to vested options and $ 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	2012	2013
			(unaudited)	
Research and development	$ 145	$ 112	$ 58	$ 70
General and administrative	290	294	146	203
Total	$ 435	$ 406	$ 204	$ 273

Results of Operations

Comparison of Six Months Ended June 30, 2012 and 2013

Revenue

The following table summarizes the results of our operations for the six months ended June 30, 2012 and 2013, together with changes in those items (in thousands):

	SIX MONTHS ENDED JUNE 30,		CHANGE 2012 VS. 2013 INCREASE/(DECREASE)
	2012	2013	
	(unaudited)		
Collaboration revenue	$ 8,207	$ 10,985	$ 2,778
Royalties	3	—	(3)
Research and development expenses	4,770	6,939	2,169
General and administrative expenses	3,561	2,872	(689)
Other income (expenses):			
Interest income	56	76	20
Interest expense	(46)	(41)	(5)
Foreign exchange gain (loss)	(143)	1,920	2,063
Gain (loss) on write-off and disposal of assets	(1,197)	11	1,208

We recognized revenue of $11.0 million for the six months ended June 30, 2013 compared to $8.2 million for the six months ended June 30, 2012, an increase of $2.8 million. The increase was primarily attributable to the recognition of $6.0 million of the upfront payment received by us in December 2012 from Teva, and the $0.6 million in additional FTE funding we received from Genentech. This was partially offset by the $3.6 million decrease in revenue from Merck compared to the six months ended June 30, 2012 in which we received $1.6 million in FTE funding related to the research agreement with Merck that ended in December 2012, and a $2.0 million option fee payment received from Merck in June 2012.

Research and Development Expenses

The following table summarizes our research and development expenses for the six months ended June 30, 2012 and 2013, together with changes in those items (in thousands):

	SIX MONTHS ENDED JUNE 30,		CHANGE 2012 VS. 2013 INCREASE/(DECREASE)
	2012	2013	
	(unaudited)		
Development programs (both collaborative and independent)	$ 1,455	$ 3,669	$ 2,214
Collaborative discovery programs	3,176	2,431	(745)
Internal early-stage research and discovery	139	839	700
Total research and development expenses	$ 4,770	$ 6,939	$ 2,169

Research and development expenses were $6.9 million for the six months ended June 30, 2013 as compared to $4.8 million for the six months ended June 30, 2012, an increase of $2.2 million. The increase was primarily attributable to a $2.9 million increase in spending spread across our early stage research and development programs and a $0.7 million increase in spending for certain of our early-stage research and discovery programs. The increases were offset in part by a $0.7 million decrease in spending for XEN402 related to Teva's assumption of the development costs of that product candidate as of January 1, 2013, and a $0.7 million decrease in spending related to certain of our product and discovery collaborations.

General and Administrative Expenses

The following table summarizes our general and administrative expenses for the six months ended June 30, 2012 and 2013, together with changes in those items (in thousands):

	SIX MONTHS ENDED JUNE 30,		CHANGE 2012 VS. 2013 INCREASE/(DECREASE)
	2012	2013	
	(unaudited)		
General and administrative expenses	$ 3,561	$ 2,872	$ (689)

General and administrative expenses were $2.9 million for the six months ended June 30, 2013 compared to $3.6 million for the six months ended June 30, 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 six months ended June 30, 2012 and 2013, together with changes in those items (in thousands):

	SIX MONTHS ENDED JUNE 30,		CHANGE 2012 VS. 2013 INCREASE/(DECREASE)
	2012	2013	
	(unaudited)		
Other income (expense):	$ (1,330)	$ 1,966	$ 3,296

Interest income increased slightly for the six months ended June 30, 2013 compared to the six months ended June 30, 2012. 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 $1.9 million for the six months ended June 30, 2013 as compared to a foreign exchange loss of $0.1 million for the six months ended June 30, 2012. The foreign exchange gain in 2013 was related to our increased cash balances and 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 six months ended June 30, 2012 in connection with a lease extension and modification agreement made effective April 1, 2012. No such item was recorded in the six months ended June 30, 2013.

Comparison of Years Ended December 31, 2011 and 2012

Revenue

The following table summarizes the results of our operations for the years ended December, 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	12,237	10,392	(1,845)
General and administrative expenses	6,795	7,069	274
Other income (expenses)			
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)

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, 2011 and 2012 together with changes in those items (in thousands):

	YEAR ENDED DECEMBER 31,		CHANGE 2011 VS. 2012 INCREASE/(DECREASE)
	2011	2012	
Development programs	$ 3,182	$ 4,606	$ 1,424
Product and discovery collaborations	7,057	5,336	(1,721)
Internal early-stage research and discovery	1,998	450	(1,548)
Total research and development expenses	$ 12,237	$ 10,392	$ (1,845)

Research and development expenses were $10.4 million for the year ended December 31, 2012 compared to $12.2 million for the year ended December 31, 2011. The decrease was primarily due to a smaller number of personnel working in research and development as we experienced normal attrition in the department without replacing the departed employees in the year.

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 INCREASE/(DECREASE)
	2011	2012	
General and administrative expenses	$ 6,795	$ 7,069	$ 274

General and administrative expenses were $7.1 million for the year ended December 31, 2012 compared to $6.8 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 year 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	
Other income (expenses):	$ 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 $169,000 for the year ended December 31, 2012 compared to a foreign exchange gain of $60,000 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 collaborator and license agreements and private placements of our common and preferred shares, as well as government funding. Through June 30, 2013, we have received an aggregate of approximately $262.0 million to fund our operations, of which approximately $140.0 million was non-equity funding pursuant to collaboration and license agreements, approximately $17.0 million was pursuant to government funding, and approximately $105.0 was pursuant to the sale of our preferred shares. As of June 30, 2013, we had $49.8 million in cash and cash equivalents.

We have incurred significant operating losses since inception. Our net loss was $12.0 million for the year ended December 31, 2011 and $4.3 million for the year ended December 31, 2012. Although we posted net income for the six months ended June 30, 2013, we had an accumulated deficit of $125.6 million through that date. We expect to continue to incur significant expenses in excess of our sublicensing and royalty revenue from Glybera 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 Isis Pharmaceuticals, Inc., or Isis, the University of British Columbia, or 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 XEN402 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, XEN402, XEN701, a selective Nav1.7 inhibitor 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 and cash equivalents 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 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 and 2012 and for the six months ended June 30, 2012 and 2013 (in thousands):

	YEAR ENDED DECEMBER 31,		SIX MONTHS ENDED JUNE 30,	
	2011	2012	2012	2013
			(unaudited)	
Net cash provided by (used in) operating activities	$ (13,689)	$ 45,573	$6,146	$(5,614)
Net cash provided by (used in) investing activities	13,889	491	910	(68)
Net cash provided by (used in) financing activities	2	—	—	(1,697)

Operating Activities

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 six months ended June 30, 2012, operating activities provided $6.1 million of cash. The collection of the receivable for $10.0 million upfront payment from the Genentech collaboration offset our net loss and a decrease in operating liabilities.

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 receivable for the $10.0 million 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, 2013, net cash used in investing activities was $0.1 million and consisted primarily of purchases of research and computer equipment.

During the six months ended June 30, 2012, net cash provided by investing activities was $0.9 million. Net cash provided by investing activities during the period consisted primarily of cash received from the sale of marketable securities of $1.0 million, partially offset by cash used to purchase research and computer equipment.

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 research and computer 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 research and computer equipment of $0.3 million.

Financing Activities

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

Net cash provided by financing activities for the six months ended June 30, 2012 as well as 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 December 31, 2012:

CONTRACTUAL OBLIGATIONS	TOTAL	LESS THAN 1 YEAR	1 TO 3 YEARS	3 TO 5 YEARS	MORE THAN 5 YEARS
			(in thousands)		
Operating leases [1]	$ 8,784	$ 924	$ 1,860	$ 1,896	$ 4,104
Long term debt [2]	1,823	—	1,823	—	—
Total obligations	$ 10,607	$ 924	$ 3,683	$ 1,896	$ 4,104

(1) Represents future minimum lease payments under non-cancelable operating leases in effect as of June 30, 2013 including the remaining lease payments for our current facilities in Burnaby, British Columbia, Canada. The minimum lease payments above do not include common area maintenance charges or real estate taxes.

(2) We issued a promissory note of $1.5 million to Isis pursuant to our collaboration and license agreement. The note bears interest, with interest compounded annually and interest payable at the time the note becomes due, which is the earlier of occurrence of certain future financing events or at a time during late 2014. Included in the balance is interest payable calculated up to the maturity date, which is also due in 2014. The note was paid in full in June 2013.

The contractual obligations table above does not include any potential future milestone or royalty payments we may be required to make under our license agreement with Isis, under which we were granted an exclusive worldwide license to XEN701, due to the uncertainty of the occurrence of the events requiring payment under that agreement. To the extent that we continue to develop and ultimately commercialize XEN701, we may be obligated to pay Isis up to $148.0 million in milestone payments plus single-digit royalties on net sales. The table also 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 arrangement provided for XEN402 under our collaboration with Teva. Our potential payment obligations in the single digit percentage range to the 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 obligation 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 two 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 May 2011, in an effort to assist in the convergence of U.S. GAAP and International Financial Reporting Standards, or IFRS, the Financial Accounting Standards Board, or FASB, issued an Accounting Standards Update related to “Fair Value Measurements: Amendments to Achieve Common Fair Value Measurements and Disclosure Requirements in U.S. GAAP and IFRS.” The standard expands existing disclosure requirements for fair value measurements and makes certain other amendments, including a requirement to categorize, by level in the fair value hierarchy, items that are required to be disclosed, but not measured, at fair value. The standard is effective for fiscal years, and interim periods within those years, beginning after December 15, 2011, and should be applied prospectively. We adopted this standard as of January 1, 2012 and its adoption did not have a material effect on our financial statements for the year ended December 31, 2012.

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 allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We can elect to take advantage of the ability to delay the adoption of new or revised accounting standards, and as a result, we may not comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for public companies that are not emerging growth companies and our financial statements may not be comparable to the financial statements of those companies. No such elections have been made for the years ended December 31, 2011 and 2012.

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, 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, 2013, we held cash of $17.8 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 $1.8 million ($1.8 million) being recorded in the Statement of Operations on the translation of these U.S. dollar cash balances into the Canadian dollar functional currency.

Interest Rate Risk

An additional market risk we face is interest rate risk. We had cash and cash equivalents of $49.8 million as of June 30, 2013, which consisted of bank deposits. 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 and cash equivalents. 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, 2013.

BUSINESS

Overview

We are a biopharmaceutical company focused on the development of novel medicines through the application of our proprietary discovery platform, which we refer to as Extreme Genetics. Our product candidates are based on genetic insights derived from our research of families where individuals exhibit severe traits, or phenotypes. We apply our expertise to predict which phenotypes are caused by single-gene defects. By identifying and characterizing the single-gene defects responsible for such severe phenotypes, we gain valuable insights into their function in human biology and their potential as drug targets. Given that these targets are often involved in diseases beyond the rare genetic disorders in which they are first identified, we are developing proprietary product candidates to treat both orphan as well as more prevalent diseases.

To date, our Extreme Genetics discovery platform has yielded collaborations with multiple pharmaceutical companies, one approved product and a pipeline of novel product candidates, including:

- Glybera, the first gene therapy approved by the European Medicines Agency, or EMA, for the treatment of the orphan disorder lipoprotein lipase deficiency, or LPLD;
- XEN402, a product candidate with Phase 2 proof-of-concept data for the orphan disorder erythromelalgia, or EM, and other more common forms of pain;
- XEN701, a preclinical product candidate in investigational new drug, or IND, enabling studies for the treatment of anemia of chronic kidney disease, or CKD, and end-stage renal disease, or ESRD;
- an oral preclinical product candidate in IND-enabling studies for the treatment of pain; and
- drug discovery programs for acne, cardiovascular disease and for the orphan disorder Dravet Syndrome, or DS.

With respect to XEN402, in December 2012 we entered into a collaborative development and license agreement with Teva Pharmaceutical Industries Ltd., or Teva, through its subsidiary, Ivax International GmbH, or Ivax, pursuant to which we granted Teva an exclusive worldwide license to develop and commercialize this product candidate. Under the terms of the agreement, Teva paid us an upfront fee of $41.0 million. We are collaborating with Teva to further develop XEN402, and Teva is funding all the related development costs. In addition, we are eligible to receive potential milestone payments totaling in aggregate up to $335.0 million, the majority of which relate to pre-commercial activities. If XEN402 is approved, we are also eligible to receive double-digit royalties on net sales worldwide, and we have an option to co-promote products in the U.S.

A key aspect of our business model is to provide to the drug target selection process the often-missing human validation using our Extreme Genetics discovery platform. By carefully selecting families with severe phenotypes, we can enhance the likelihood of discovering a drug target that may have a major effect in humans. From this knowledge, 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, such as antisense or gene therapy, with the goal of developing novel medicines.

Our business strategy is to advance a broad portfolio of product candidates while maintaining an efficient organization. We intend to achieve this by:

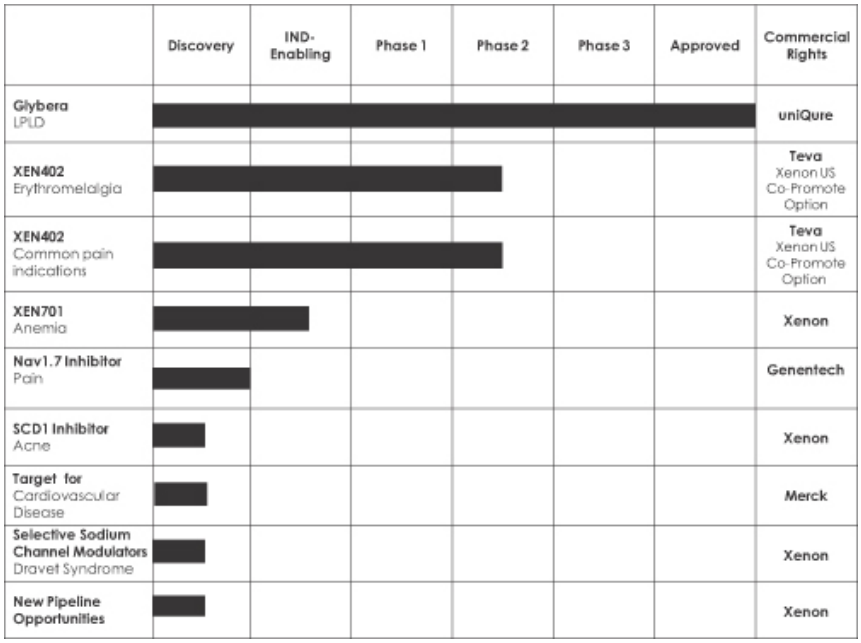
- selectively developing and commercializing products for orphan and niche diseases independently where high unmet medical needs exist (where we define a niche disease as a sub-population of a larger indication); and

- collaborating with major pharmaceutical companies to leverage our discoveries for more prevalent diseases representing larger market opportunities.

We have implemented our business strategy by entering into multiple alliances with key industry collaborators, including Genentech, Inc., Merck Sharp & Dohme GmbH (formerly known as Merck Sharp & Dohme Research Ltd.), an affiliate of Merck & Co., Inc., or Merck, and Teva that have in aggregate generated more than $140.0 million in non-equity funding through June 30, 2013 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.

Our Pipeline

The following is a summary of our current product pipeline:



Approved Product

Glybera

Glybera is a gene therapy approved in the European Union, or EU, in November 2012 for the treatment of the orphan lipid disorder LPLD. 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 elevated blood triglycerides resulting in pancreatitis and in some cases, death. Glybera contains a variant of lipoprotein lipase, or LPL, called LPL^{S477X} . Together with collaborators from the University of British Columbia, we demonstrated that the LPL^{S477X} variant resulted in increased LPL enzyme activity leading to reduced triglyceride levels in humans. We believe this increased enzyme activity of LPL^{S477X} may allow for a more effective gene therapy for LPLD. Glybera is the first product derived from our platform to receive commercial approval and is the first gene therapy to be approved in the EU or North America. Glybera was developed by our licensee, uniQure Biopharma B.V., or uniQure. 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 Europe and more than a dozen other countries including Brazil, China, Mexico and Russia. uniQure has also publicly disclosed that it is preparing to apply for regulatory approval of this product in the U.S., Canada and other markets. We are eligible to receive a double-digit percentage of all compensation received by uniQure relating to the technology or products licensed by us.

Product Candidates in Development

XEN402

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. To select our pain target, we discovered that the Nav1.7 protein is deficient in a rare genetic disorder known as congenital indifference to pain, or CIP, a condition where humans cannot feel pain. We have observed evidence of effect for XEN402 in four Phase 2 proof-of-concept clinical trials, including two trials in the orphan disorder EM, one trial in postherpetic neuralgia, or PHN, and one trial in dental 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 XEN402. In collaboration with Teva, we are currently developing XEN402 as a topical product to treat the pain associated with EM, as well as for other more common forms of pain. In April 2013, we and Teva announced that XEN402 had received orphan designation from the U.S. Food and Drug Administration, or FDA, for the treatment of EM. We are working with the FDA on a regulatory strategy designed to support product approval. We expect to initiate the trial for XEN402 in EM and a Phase 2 trial for a non-orphan indication in 2014. Under the terms of the agreement, Teva paid us an upfront fee of $41.0, million and we are eligible to receive potential milestone payments totaling up to $335.0 million, the majority of which relate to pre-commercial achievements. If XEN402 is approved, we are also eligible to receive double-digit royalties on net sales worldwide and we have an option to co-promote products in the U.S.

XEN701

XEN701 is a subcutaneously administered antisense oligonucleotide compound designed to inhibit the expression of the protein hepcidin. To select our anemia drug target, we identified mutations in genes underlying a rare disorder known as juvenile hemochromatosis, or JH, a condition of iron overload, or excess. JH is caused by single-gene defects the consequences of which is deficiency of the hepcidin protein. This deficiency of hepcidin causes the iron overload in JH patients. In anemia of chronic disease, or ACD, the converse is true. Elevated levels of hepcidin cause a restricted iron supply that results in low hemoglobin, or anemia. XEN701 is the first drug to enter development in our collaboration with Isis Pharmaceuticals, Inc., or Isis, to develop antisense drugs that target the hepcidin-hemojuvelin pathway. We have exclusive worldwide rights for development and commercialization of XEN701. XEN701 is currently in IND-enabling safety and toxicology studies and we expect to commence Phase 1 studies during the first half of 2014. Initially, our development strategy will focus on treating the anemia associated with CKD or ESRD in niche populations where the use of erythropoietin stimulating agents, or ESAs, the current standard of care, is subject to a black box warning (the FDA's highest level of warning, indicating that a particular drug may lead to death or serious injury) or is contraindicated. For example, it is estimated that approximately 8% to 10% of CKD and ESRD patients in the U.S. have a history of cancer. Despite this, some of these patients continue to receive ESAs even though ESA labels contain a black box warning for patients with cancer. As the mechanism of XEN701 is distinct from that of ESAs, we anticipate XEN701 may provide an alternative in these niche populations.

Selective Inhibitor of Nav1.7 for the Treatment of Pain

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 such 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. In December 2011, we entered into a collaborative research and license agreement with Genentech, Inc., or Genentech, and its affiliate, F. Hoffmann-La Roche Ltd, or Roche, to discover and develop inhibitors of Nav1.7 for the treatment of pain. The goal of the collaboration is to discover and develop orally active products that selectively inhibit this sodium channel. A small-molecule preclinical product candidate was selected in 2013 for development and is currently in the IND-enabling stage. Under the terms of the agreement, Genentech paid us an upfront fee of $10.0 million and we have subsequently earned a $5.0 million milestone payment for the selection of the development-stage product candidate. We are also eligible to receive pre-commercial and commercial milestone payments with respect to the licensed products totaling up to an additional $621.0 million. In addition, we are also eligible to receive royalties based on net sales of the products, which range from single to low double-digit range percentage for small-molecule inhibitors and a single-digit percentage for large-molecule inhibitors of Nav1.7.

Product Candidates in Discovery

Selective Small-Molecule Inhibitors of SCD1 for 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 acne and seborrhea. We have developed novel small-molecule SCD1 inhibitors. In animal models, we have shown that our topical small-molecule SCD1 inhibitors can reduce sebaceous gland size and number. We have identified multiple compounds that have properties suitable for topical administration including adequate skin penetration and photostability.

Selective Small-Molecule Inhibitors of Targets for 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 cardiovascular target and compound inhibitors that were discovered during the research collaboration.

Selective Small-Molecule Sodium Channel Modulators for DS

DS is a severe form of childhood epilepsy in which the majority of cases results from deficiency of the Nav1.1 sodium channel. Nav1.1 plays a critical role in neuronal inhibitory pathways. When it is deficient, the brain becomes hyper-excitable leading to the intermittent and often severe seizures characteristic of DS. Thus, we believe selective sodium channel modulators may reduce brain hyper-excitability and limit or prevent the seizures of DS.

New Pipeline Opportunities

Using our Extreme Genetics discovery platform, we are currently working to identify new drug targets for the treatment of pain. In addition, we are evaluating other opportunities in multiple indications outside of pain.

Our Strategy

Our goal is to apply our Extreme Genetics discovery platform to build a sustainable and profitable biopharmaceutical company that discovers, develops and commercializes innovative therapeutics. Our key strategic initiatives include:

- *Discovering Additional Novel Targets.* We are committed to expanding our network of clinical collaborations and access to families with severe phenotypes to identify novel targets for orphan and niche, as well as more prevalent, diseases. To support this strategy, we will continue to invest in personnel with clinical genetics expertise and in technologies and methods that we believe will enhance our Extreme Genetics discovery platform.
- *Expanding Our Proprietary Pipeline of Orphan and Niche Disease Product Candidates.* We will continue to develop product candidates for orphan and niche diseases. This focus may 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. These benefits may 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 beyond Phase 2 proof-of-concept trials and potentially through commercialization.
- *Developing Product Candidates for More Prevalent Diseases through Pharmaceutical Collaborations.* We plan to continue to partner programs, including product candidates for more prevalent diseases with pharmaceutical companies to access additional development and commercial resources, expertise and non-dilutive funding to enable the advancement of a broader and more diverse pipeline.
- *Independently Commercializing Selected Products.* We intend to develop a specialized sales force in circumstances where we expect to be able to cost-effectively commercialize approved products in orphan and niche indications. This capability would enable us to co-promote XEN402, if we exercise our option to do so, as well as market any approved products that we may independently commercialize.

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 provides us with an advantage that may help us to select drug targets that may be more biologically relevant in humans. Our platform is built on the foundation of identifying and studying throughout the world rare individuals and families with severe phenotypes in order to discover single-gene defects that have major biological effects in humans. By studying these rare individuals and families with severe phenotypes, we can obtain critical insights into the genes underlying these diseases and their related biology in order 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.

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, three development-stage product candidates and four preclinical discovery programs. Our platform has also allowed us to attract numerous collaborations with leading pharmaceutical companies, including Genentech, Merck and Teva, that have in aggregate generated more than $140.0 million in non-equity funding through June 30, 2013 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.

Programs

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

Glybera is a gene therapy approved in the European Union, or EU, in November 2012 for the treatment of the orphan lipid disorder LPLD. 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 elevated blood triglycerides resulting in pancreatitis and in some cases, death. Glybera contains a variant of lipoprotein lipase, or LPL, called LPL^{S477X}. Together with collaborators from the University of British Columbia, we demonstrated that the LPL^{S477X} variant resulted in increased LPL enzyme activity leading to reduced triglyceride levels in humans. We believe this increased enzyme activity of LPL^{S477X} may allow for a more effective gene therapy for LPLD. Glybera is the first product derived from our platform to receive commercial approval and is the first gene therapy to be approved in the EU or North America. Glybera was developed by our licensee, uniQure Biopharma B.V., or uniQure. 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 Europe and more than a dozen other countries including Brazil, China, Mexico and Russia. uniQure has also publicly disclosed that it is preparing to apply for regulatory approval of this product in the U.S., Canada and other markets. We are eligible to receive a double-digit percentage of all compensation received by uniQure relating to the technology or products licensed by us.

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 the University of British Columbia 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 and 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 shown in a clinical trial to reduce triglycerides by approximately 40%, was well-tolerated with no material safety concerns and resulted in a reduction in the incidence of acute pancreatitis over the two-year study period.

Commercialization of Glybera

Glybera was approved for commercialization in the EU in November 2012. uniQure publicly disclosed entry into a commercialization agreement with Chiesi in July 2013. uniQure has also publicly disclosed that it is preparing to apply for regulatory approval of this product in the U.S., Canada and other markets.

XEN402: A Small Molecule for the Treatment of the Orphan Disease EM and Other Pain Disorders

XEN402 is a novel 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. We discovered that the Nav1.7 protein is deficient in a rare genetic disorder known as congenital indifference to pain, or CIP, a condition where humans cannot feel pain. We have observed evidence of effect for XEN402 in four Phase 2 proof-of-concept clinical trials, including two trials in erythromelalgia or EM, one trial in postherpetic neuralgia, or PHN, and one trial in dental 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 XEN402. In collaboration with Teva, we are currently developing XEN402 as a topical product to treat the pain associated with the orphan disorder EM, as well as for other more common forms of pain. In April 2013, we and Teva announced that XEN402 had received orphan designation from the FDA for the treatment of EM. We are working with the FDA on a regulatory strategy designed to support product approval. We expect to initiate the trial for XEN402 in EM and a Phase 2 trial for a non-orphan pain indication in 2014. Under the terms of the agreement, Teva paid us an upfront fee of $41.0 million and we are eligible to receive potential milestone payments totaling up to $335.0 million, the majority of which relate to pre-commercial achievements. If XEN402 is approved, we are also eligible to receive double-digit royalties on net sales worldwide and have an option to co-promote products in the U.S.

Discovery of XEN402

Using our Extreme Genetics discovery platform, we discovered Nav1.7 by studying families with a rare disorder called CIP. CIP patients are unable to feel pain for painful events including fractures, childbirth, osteomyelitis and osteoarthritis, severe burns, ulcers, wounds and tooth abscesses. Based on this severe phenotype of absence of pain in humans, 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. In addition, XEN402 is also able to inhibit additional sodium channels including those

that are believed to play a role in pain signaling. We believe this mixed sodium channel inhibition might therefore enhance the potential efficacy of XEN402 in chronic pain. We have demonstrated efficacy with this compound in multiple animal models for pain.

In contrast to the absence of pain in CIP, when Nav1.7 is deficient, overactivity of Nav1.7 can cause the spontaneous pain of EM. Therefore, we believe that XEN402, which inhibits Nav1.7, has a relevant mechanistic rationale as a treatment for EM.

About EM

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 typically 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 extremities. 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 incidence rate that has been reported in studies of EM ranges from 0.36 per 100,000 person-years in Sweden to 1.3 per 100,000 person-years 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.

XEN402 EM Clinical Development

XEN402 has been studied in both a topical formulation and an oral formulation in Phase 1 clinical trials in healthy volunteers and small, exploratory Phase 2 proof-of-concept clinical trials in EM. The table below summarizes the results of these XEN402 trials:

Topical Phase 2 EM Trial

DESIGN	KEY SAFETY DATA	KEY EFFICACY DATA
n Double-blind, randomized, placebo-controlled n Eight 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 serious adverse events, or SAEs, or deaths, with local application site reactions being the most common drug-related adverse event reported	n Three of seven patients (43%) on XEN402 showed consistent clinically meaningful reductions in induced and daily pain compared to baseline n Four of six (67%) patients on XEN402 who used rescue cooling showed a reduction in cooling usage compared to baseline n Six of seven (86%) patients on XEN402 had an improvement in sleep interference scores compared to baseline

Topical Phase 1 Trial

DESIGN	KEY SAFETY DATA	KEY EFFICACY DATA
n Cumulative irritation, double-blind, randomized, placebo, positive and negative controlled n 20 healthy volunteers n 4% and 8% ointment and placebo and positive and a 0.9% saline negative control were dosed once daily for 21 days	n No clinically meaningful difference was observed between cumulative skin irritation scores for 4% and 8% ointment, placebo and the negative control n The positive control showed greater skin irritation n No SAEs or deaths	n Not applicable

Oral Phase 2 EM Trial

DESIGN	KEY SAFETY DATA	KEY EFFICACY DATA
n Double-blind, randomized, placebo-controlled crossover n Four EM patients randomized n 400 mg or placebo was dosed twice daily for 2 days	n Most common adverse events, or 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)

Oral Phase 1 Trial

DESIGN	KEY SAFETY DATA	KEY EFFICACY DATA
n Double-blind, randomized, placebo-controlled n Single-ascending dose, or SAD, study in 38 healthy volunteers up to 800 mg n Multi-ascending dose, or MAD, study in 32 healthy volunteers up to 400mg twice daily for 5.5 days	n Maximal tolerated dose, or MTD, for SAD study was 500 mg n Dose-limiting toxicity included dizziness and drowsiness observed at 800 mg single dose n Occasional short-lived AEs of mild to moderate dizziness, drowsiness and tremor were reported by some subjects in the 500 mg single dose n MTD in MAD study was not achieved n Occasional short-lived AEs of mild to moderate dizziness and drowsiness were reported by some subjects in the 400 mg twice daily dose	n Not applicable

Topical XEN402 Phase 2 Trial in EM

We conducted a small Phase 2 proof-of-concept trial with XEN402 ointment in patients with primary EM. This exploratory trial was a randomized, double-blind, placebo-controlled design with eight subjects (seven XEN402 and one placebo) comparing 8% XEN402 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 XEN402, 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, XEN402 plasma concentrations were low and XEN402 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

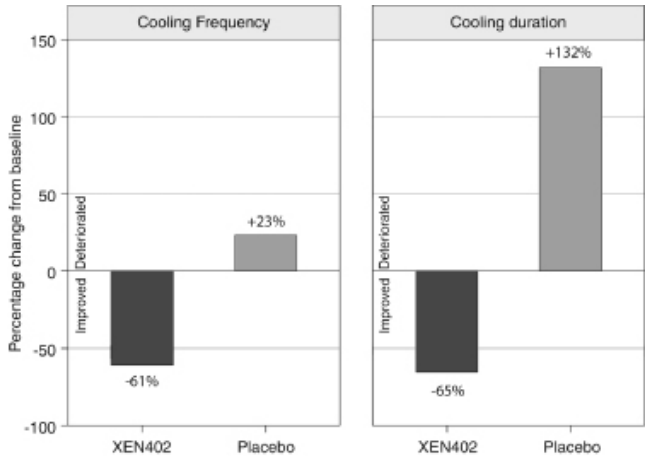
drowsiness are common side effects for many currently prescribed centrally-acting analgesics. Local application site reactions were the most common drug-related AEs observed.

In this trial, three of the seven (43%) XEN402-treated subjects responded positively based on the magnitude and consistency of improvement across the measured efficacy parameters. While the four remaining XEN402-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.

We developed a novel pain induction method for assessing the response of XEN402 using an electric heater placed at a standardized distance from the subject's feet. Four of the seven (57%) subjects receiving XEN402 treatment responded better to the standard heat inductions compared to pre-treatment. Three of these seven (43%) subjects showed greater 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 XEN402-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 XEN402, this may indicate the product is reducing the number and/or intensity of their EM flares. Four of the six (67%) XEN402-treated subjects who used cooling at baseline showed a meaningful 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 XEN402 used less rescue cooling compared to their baseline measurements. The amount of daily cooling usage, including cooling frequency and cooling duration, for subjects on XEN402 or placebo as a percentage change from baseline is shown below.



EM flares often wake patients several times each night and an improvement in the sleep interference scores could indicate that XEN402 may reduce the number and/or intensity of the flares during sleep. Six of the seven (86%) subjects receiving XEN402 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.

Oral XEN402 Phase 2 Trial in EM

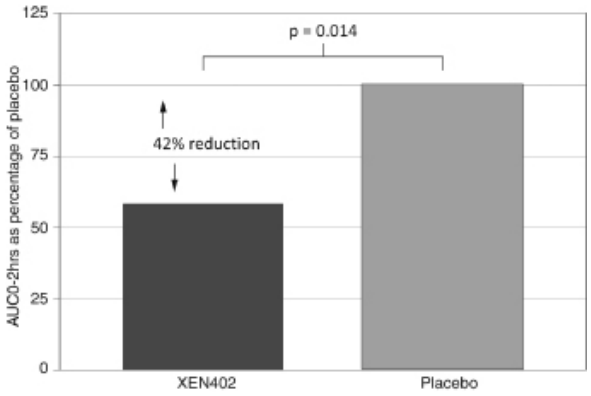
We conducted a small Phase 2 proof-of-concept trial with oral XEN402 in patients with primary EM. This exploratory trial, which was published in the journal *Pain*, Goldberg, Y.P. et al *Pain* 153 (2012) 80-85, was a randomized,

double-blind, placebo-controlled, two-period crossover design with four subjects comparing oral XEN402 to placebo each administered twice per day for a duration of two days. In one treatment period, subjects received XEN402 (400 mg bid), and in the other treatment period, subjects received placebo. The order in which the subjects received each treatment was randomized.

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.

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 XEN402, 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 XEN402 dosing period.

Mean total pain intensity scores were measured for the two hours following each pain induction over the two day treatment period with either XEN402 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 $AUC_{0\text{-}2hrs}$. Data are presented as a mean $AUC_{0\text{-}2hrs}$ for the three subjects 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 XEN402 compared to placebo (p=0.014).



Teva is conducting work in an attempt to improve on the oral formulation.

Future Development Plans for XEN402 in EM

We are collaborating with Teva on the development of topical XEN402 for EM. The rationale for selecting topical XEN402 for treating EM includes the following:

- EM pain is generally localized to the feet and hands, making application of topical XEN402 a practical method of administration;
- EM pain appears to have a peripheral component;
- Nav1.7, which is the target for XEN402, is expressed in peripheral nerve endings in the skin and there is scientific data supporting a role of this target in EM pain; and
- topical XEN402 provides high local concentrations of drug in the skin and underlying tissue with limited exposure of the compound to non-target tissues, which we believe may reduce systemic side effects.

XEN402 Clinical Development for Other Pain Indications

We believe that XEN402 may have broader potential applicability as a pain drug beyond its use in the treatment of EM. 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 neuropathic and inflammatory pain.

Many chronic pain conditions have unmet medical need providing additional market opportunities for novel pain drugs. The current standards of care for more common forms of pain such as osteoarthritis, chronic low back pain and diabetic neuropathic pain, are often lacking in robust efficacy and may result in common side effects, such as nausea, dizziness and sleepiness. Certain anti-inflammatory pain medications have FDA black box warnings for gastrointestinal bleeding and cardiovascular events, both of which can be fatal. Despite these currently available treatments, we believe that there may be subpopulations of pain patients with unmet medical needs, which XEN402 may be able to address given its novel mechanism of action.

Prior to our collaboration with Teva, we had concluded two Phase 2 proof-of-concept trials, one for acute inflammatory dental pain with oral XEN402 and another for the neuropathic pain of PHN with topical XEN402. These trials were performed to better understand the potential for XEN402 to treat more common forms of pain.

Topical XEN402 Phase 2 Trial in PHN

DESIGN	KEY SAFETY DATA	KEY EFFICACY DATA
n Double-blind, randomized, placebo-controlled, cross-over n 70 subjects randomized n 8% ointment or placebo administered twice daily for three weeks	n Safe and well tolerated n The most frequent AEs (greater than 5% frequency) included local application site reactions, nasopharyngitis and urinary tract infections, or UTIs n Fewer related treatment emergent AEs for XEN402 (18%) versus placebo (30%) n Low plasma exposure n No meaningful central nervous system side effects n Less application site pain for XEN402 (16% placebo versus 3% XEN402) and pruritis, or itch, (13% placebo versus 3% XEN402) n No drug-related SAEs	n There was a reduction in the primary efficacy endpoint (change from baseline in mean daily pain score) for XEN402 and placebo, but the difference between treatments was not statistically significant n Significantly increased proportion of XEN402-treated patients reported 30% or greater (p=0.049) and 50% or greater (p=0.0078) reduction in their pain compared to placebo n A retrospective exploratory analysis not described in the study protocol showed that a significant increased proportion of XEN402-treated patients reported 30% or greater improvement in sleep (p=0.034) compared to placebo

Oral XEN402 Phase 2 Trial in Dental Pain

DESIGN	KEY SAFETY DATA	KEY EFFICACY DATA
n Double-blind randomized, placebo-controlled n 61 subjects randomized n Single oral dose of 500 mg or placebo	n Safe and well tolerated n The most frequently reported AEs were nausea, dizziness, headache and drowsiness, which were mild or moderate in intensity n No SAEs	n No statistical difference in the primary efficacy variable evaluated was observed n The primary and secondary endpoints showed consistent trends in favor of reduced pain for XEN402 versus placebo n Certain secondary endpoints achieved statistical significance n In a post-hoc analysis, significantly increased proportion of XEN402-treated patients reported 30% or greater and 50% or greater reduction in their pain compared to placebo

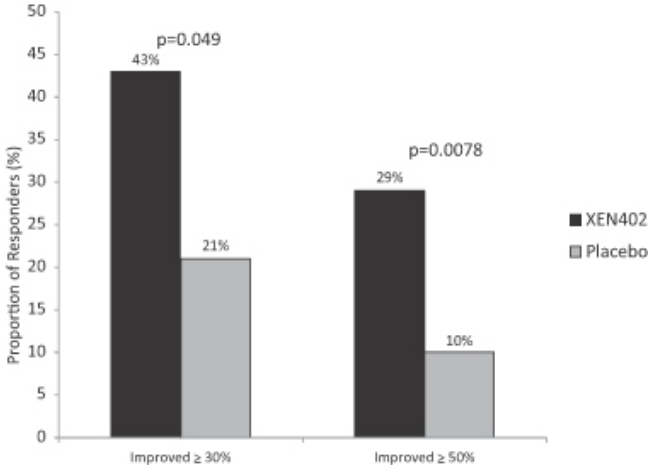
XEN402 Trial in Postherpetic Neuralgia, or PHN

We conducted a Phase 2 proof-of-concept trial of topical XEN402 in 70 PHN patients. On average, 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 XEN402 was administered twice daily with each patient receiving either XEN402 or placebo for three weeks, then after a washout period, the subjects received the alternative treatment.

Topical XEN402 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 XEN402, PHN patients reported reduced site application pain (3% XEN402 versus 16% placebo) and less pruritis, or itch, (3% XEN402 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.

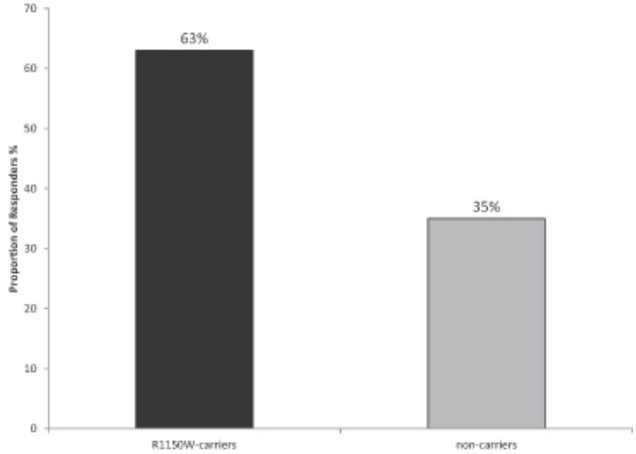
There was a reduction in the primary efficacy endpoint (change from baseline in mean daily pain score) for XEN402 and placebo, but the difference between treatments was not statistically significant. Multiple secondary endpoints were studied, including the proportion of subjects achieving at least 30% 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 XEN402 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 XEN402 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 XEN402 exhibited a statistically significant 30% or greater (p=0.034) improvement in sleep compared to placebo. Importantly, a trend to reduced use of rescue pain medication in the responders on XEN402 was observed, suggesting rescue use did not explain the greater response in these subjects.

XEN402 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 variant within Nav1.7 called R1150W. 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 may experience a greater amount of pain compared to those subjects who do not have this variant. Cell-based assays suggest this variant may increase the activity of the Nav1.7 channel and this increased activity may explain why such patients feel more pain. 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 XEN402. Although it was not a pre-selected endpoint of the trial, a trend towards greater response to XEN402 was observed in R1150W-carriers versus non-carriers.

A greater proportion of Nav1.7 R1150W-carriers had a clinically meaningful 30% or greater response to XEN402 than non-carriers.



Future Development Plans for Topical XEN402

Teva plans to perform pain trials in non-orphan pain indications with topical XEN402 with the goal of broadening its market potential to other pain indications beyond EM.

Further analysis of the R1150W variant described above is planned to better understand the potential of this variant to predict response to XEN402.

Oral XEN402 Trial in Dental Pain

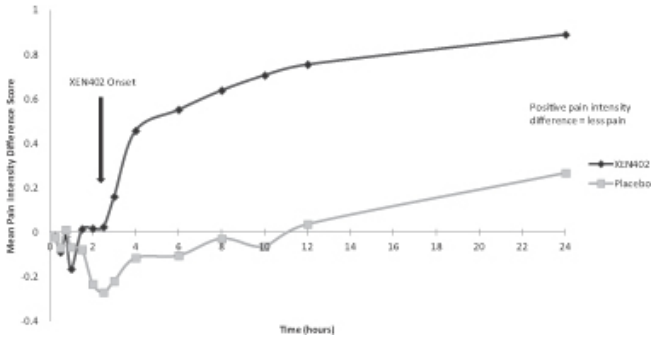
The third molar tooth extraction is an established model of inflammatory pain. We performed a randomized, double-blind, placebo-controlled, Phase 2 proof-of-concept trial in 61 healthy male subjects. 41 subjects received a single oral 500 mg dose of XEN402 and 20 subjects received placebo. XEN402 was generally safe and well-tolerated. There were no SAEs. The most frequently reported AEs were dizziness, nausea, drowsiness and headache, all of which were mild or moderate in intensity.

The primary and all secondary endpoints showed consistent trends in favor of reduced pain for XEN402 versus placebo.

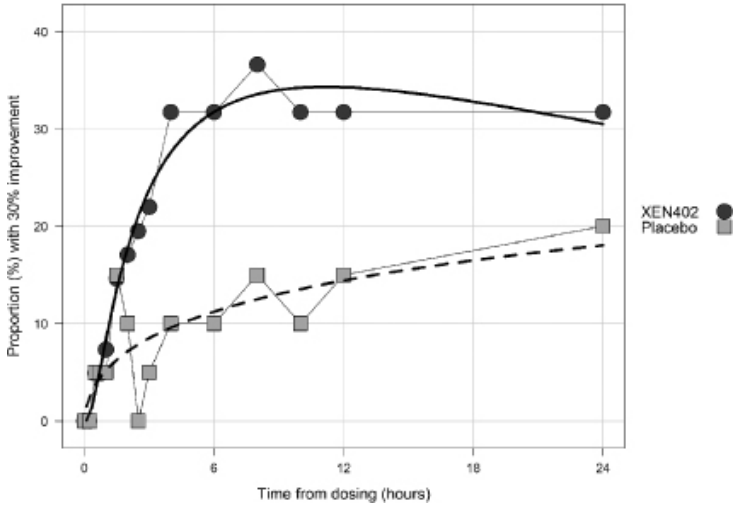
The primary efficacy endpoint was the change in total pain relief at six hours post-dose, or TOTPAR-6. For this endpoint, XEN402-treated subjects experienced greater pain relief compared to subjects who received placebo, although the difference did not achieve statistical significance. Multiple secondary 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.

Pain intensity was reduced on XEN402 compared to placebo, however, these results did not reach statistical significance. The mean XEN402 PID curve starts to separate from the placebo at approximately two hours (see arrow included in figure below). Prior to the onset of efficacy there was a relatively high rescue rate of approximately 40% of XEN402-treated subjects and approximately 50% of placebo-treated subjects. The high rescue rate reduced the power of the trial to show statistical significance.

XEN402 showed a 0.8 point separation from placebo in pain intensity difference at 12 hours. Note the separation marked by the arrow indicating time of onset of XEN402-effect at approximately 2.0 hours after dosing.



Post-hoc exploratory analyses demonstrated a statistically significant proportion of subjects on XEN402 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.



We concluded that these data suggest XEN402 may be a candidate for further study in inflammatory pain.

XEN701: An Antisense Oligonucleotide for the Treatment of Anemia of Chronic Kidney Disease

XEN701 is a subcutaneously administered antisense oligonucleotide compound designed to inhibit the expression of the protein hepcidin. To select our anemia drug target, we identified mutations in genes underlying a rare disorder known as juvenile hemochromatosis, or JH, a condition of iron overload, or excess, that presents at an early age. JH is caused by single-gene defects the consequences of which is deficiency of the hepcidin protein. This deficiency of hepcidin causes the iron overload in JH patients. In anemia of chronic disease, or ACD, the converse is true. Elevated levels of hepcidin cause a restricted iron supply that results in low hemoglobin or anemia. XEN701 is the first drug to enter development in our collaboration with Isis to develop antisense drugs that target the hepcidin-hemojuvelin pathway. We have exclusive worldwide rights for development and commercialization of XEN701. XEN701 is currently in IND-enabling safety and toxicology studies and we expect to commence Phase 1 studies during the first half of 2014. Initially, our development strategy will focus on treating the anemia associated with chronic kidney disease, or CKD, or end stage renal disease, or ESRD, in niche populations where the use of

erythropoietin stimulating agents, or ESAs, the current standard of care, is subject to a black box warning (the FDA's highest level of warning, indicating that a particular drug may lead to death or serious injury) or is contraindicated. For example, it is estimated that approximately 8% to 10% of CKD and ESRD patients in the U.S. have a history of cancer. Despite this, some of these patients continue to receive ESAs even though ESA labels contain a black box warning for patients with cancer. As the mechanism of XEN701 is distinct from that of ESAs, we anticipate XEN701 may provide an alternative in these niche populations.

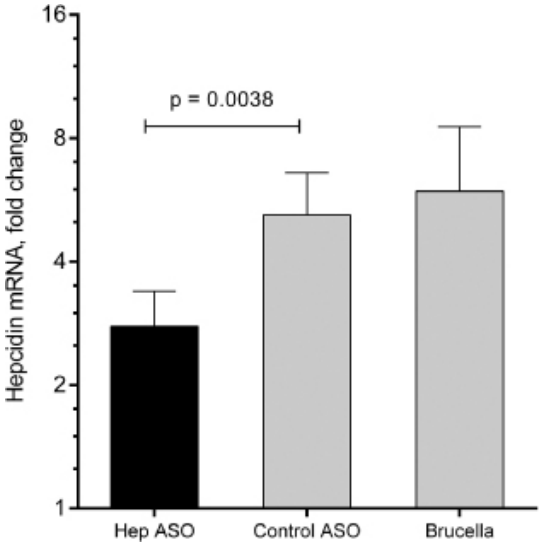
Discovery of XEN701

XEN701 is a selective antisense oligonucleotide, or ASO, compound that is designed to inhibit the production of human hepcidin by degrading the messenger and pre-messenger RNA of hepcidin primarily in the liver.

JH is a rare genetic disorder of iron overload. We showed that JH is caused by genetic defects that result in a deficiency of the protein hepcidin. Hepcidin is now recognized as an important regulator of iron metabolism in humans. Multiple published studies have demonstrated that elevated circulating hepcidin is a characteristic of ACD. This increase in hepcidin expression is in response to chronic inflammation and associated with declining renal function. It is the excess hepcidin in ACD that results in restricted iron availability impairing red blood cell production resulting in anemia. XEN701 is designed to lower hepcidin levels, which we believe may reverse the restricted iron availability and thereby reverse the anemia.

XEN701 is the first drug to enter development in our collaboration with Isis, and uses Isis' second generation MOE-Gapmer chemistry. The discovery of XEN701 utilized a screening process that, according to Isis, results in an improved human side effect profile for newer second-generation antisense oligonucleotides. In non-human primate studies, XEN701 was generally well-tolerated and after six weeks of weekly subcutaneous dosing the liver reduction of hepcidin mRNA was 75% with a corresponding decrease in plasma hepcidin protein levels of 66%. Furthermore, we have demonstrated, using mouse-specific antisense oligonucleotides targeting hepcidin, that we can reduce elevated hepcidin levels in the presence of inflammation.

Brucella antigen causes an inflammatory response that induces hepcidin liver expression. Mouse-specific hepcidin ASO, or Hep ASO, is able to significantly reduce hepcidin liver messenger RNA, or mRNA, induction by Brucella antigen, whereas the control ASO does not have this effect.



We believe that the antisense approach offers distinct advantages as a therapeutic strategy to lower hepcidin, including the following:

- hepcidin is primarily expressed in the liver and antisense compounds distribute readily to the liver;

- the suppression of gene expression at the level of RNA may be a more effective therapeutic intervention strategy given the relatively large (up to 100 fold or more) range of hepcidin protein in humans depending on the underlying inflammatory state; and
- we are not aware of any reported drug-drug metabolism interactions with antisense compounds, which may be beneficial as CKD and ESRD patients generally take multiple medications.

About Anemia in Niche CKD and ESRD Populations

The anemia associated with CKD and ESRD has many of the characteristics of ACD, but the condition is exacerbated by renal insufficiency which causes a decrease in the production of erythropoietin. Erythropoietin is a hormone produced by the kidney that interacts with the EPO receptor in bone marrow to stimulate red blood cell production. As a direct result, ESAs are used to successfully treat anemia in many CKD and ESRD patients.

Despite their success in treating anemia of CKD and ESRD, ESAs have a FDA black box warning of increased mortality and/or increased risk of tumor progression or reoccurrence in patients with cancer, and increased risk of death, myocardial infarction, stroke, venous thromboembolism and thrombosis of vascular access. ESAs are also contraindicated in patients with uncontrolled hypertension. A new anemia drug targeting a distinct mechanism to ESAs could offer an alternative for treating anemia in CKD and ESRD patients, where warnings exist for the use of currently available ESAs.

We have estimated from the U.S. Renal Data System that approximately 460,000 CKD and ESRD patients in the U.S. have their anemia treated with ESAs. Approximately 8% to 10% of these patients are estimated to have cancer, and may be at risk of increased mortality and/or increased risk of tumor progression or reoccurrence. Furthermore, cardiovascular disease is even more common in CKD and ESRD patients compared to the general population. Up to 25% of such patients have been reported to have poorly-controlled hypertension. The incidence of acute coronary syndrome in ESRD has been reported to be 2.9% per year and approximately 40% of patients initiating dialysis have been reported to have ischemic heart disease at the onset of dialysis. In addition, an estimated 5% of CKD and ESRD patients do not have their anemia adequately treated by currently available therapies. We believe these niche populations represent potential development opportunities for XEN701.

Future Development Plans for XEN701

We plan to initiate a Phase 1 single-ascending and multi-ascending dose study in human volunteers in the first half of 2014. Thereafter, we plan to initiate a Phase 2 proof-of-concept trial in CKD or ESRD patients with anemia.

Selective Inhibitors of Nav1.7 for Pain

Chronic pain conditions such as severe cancer pain and neuropathic pain are generally recognized as significant unmet medical needs, therefore providing commercial opportunities for a new oral pain drug. Currently available pain drugs such as narcotics often have either a lack of meaningful pain relief for many patients or dose limiting side effects. An oral selective Nav1.7 inhibitor could present a novel mechanism for the treatment of moderate to severe pain. In December 2011, we entered into a collaborative research and license agreement with Genentech and its affiliate, Roche, to discover and develop inhibitors of Nav1.7 for the treatment of pain. The goal of the collaboration is to discover and develop orally active products that selectively inhibit this sodium channel. In collaboration with Genentech, we have created a novel family of potent and selective Nav1.7 inhibitors that have pharmacokinetic profiles suitable for oral administration. A small-molecule preclinical product candidate was selected in 2013 for development and is currently in the IND-enabling stage. Under the terms of the agreement, Genentech paid us an upfront fee of $10.0 million and subsequently we have earned a $5.0 million milestone payment for the selection of the development-stage product candidate. We are also eligible to receive pre-commercial and commercial milestone payments with respect to the licensed products totaling up to an additional $621.0 million. In addition we are also eligible to receive royalties based on net sales of the products, which range from single to low double-digit range percentage for small-molecule inhibitors and a single-digit percentage for large-molecule inhibitors of Nav1.7.

Programs in Discovery

Selective Small-Molecule Inhibitors of SCD1 for 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 acne and seborrhea. We have developed novel small-molecule SCD1

inhibitors. In animal models, we have shown that our topical small-molecule SCD1 inhibitors can reduce sebaceous gland size and number. We have identified multiple compounds that have properties suitable for topical administration including adequate skin penetration and photostability.

Acne affects 40 to 50 million people in the U.S., with 10% to 20% of adolescents having a moderate to severe form of the condition. In keeping with our business strategy, our preference is to partner our SCD1 inhibitor program for further development for acne.

Selective Small-Molecule Inhibitors of Targets for 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.

Selective Small-Molecule Sodium Channel Modulators for DS

DS is a severe form of childhood epilepsy in which the majority of cases result from deficiency of the Nav1.1 sodium channel. Nav1.1 plays a critical role in neuronal inhibitory pathways. When it is deficient, the brain becomes hyper-excitable leading to the intermittent and often severe seizures characteristic of DS. Thus, we believe selective sodium channel modulators may reduce brain hyper-excitability and limit or prevent the seizures of DS.

We have developed substantial expertise in sodium-channel biology and selective chemistries from our pain program. We intend to leverage this expertise for the development of selective sodium channel modulators for DS. Given the nature of this orphan disorder, we believe that DS may represent an attractive opportunity for us to advance independently.

New Pipeline Opportunities

Using our Extreme Genetics discovery platform, we are currently working to identify new drug targets for the treatment of pain. For example, we are working on additional CIP families that are not explained by Nav1.7 deficiency as well as families with severe pain phenotypes such as paroxysmal extreme pain disorder. In addition, we are evaluating other opportunities in multiple indications outside of pain.

Strategic Alliances

Agreement with uniQure for Glybera

Effective August 2000, we entered into a sublicense and research agreement with Amsterdam Molecular Therapeutics, or AMT, pursuant to which we granted to AMT an exclusive, worldwide sublicense under certain intellectual property controlled by us to develop and commercialize compounds related to the variant of LPL, called LPL^{S447X}. We collaborated with AMT to develop an LPL gene therapy product, Glybera, which contains the LPL^{S447X} variant. Certain of AMT's assets, including the rights to the intellectual property covered by our agreement, were subsequently acquired by uniQure in April 2012. Glybera was approved in the EU in November 2012 to treat LPLD. 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 by uniQure and its affiliates. The royalty rates are reduced to a low single-digit when the licensed patents expire. If uniQure grants a sublicense to a third party, then we receive a double-digit percentage of all non-royalty compensation that uniQure receives from such sublicensee (for example upfront payments and milestone payments), plus a double-digit percentage of any royalties that uniQure receives from such sublicensee based on sales of products covered by the licensed patents. Through June 30, 2013, we have received upfront fees and milestone payments totaling CAD$575,000, and are eligible to receive certain additional milestone payments of approximately CAD$200,000 for Glybera and CAD$600,000 for each subsequent product, if any, developed pursuant to the agreement with uniQure. We, in turn, have certain payment obligations to our licensor, the University of British Columbia, based on amounts received from uniQure or otherwise based on the exploitation of the licensed intellectual property.

In June 2013, uniQure granted Chiesi a sublicense to commercialize Glybera in Europe and selected other countries. We are eligible to receive a double-digit percentage of all compensation received by uniQure relating to the technology or products licensed by us.

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 Teva for XEN402

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 XEN402.

Under the terms of the agreement, Teva paid us an upfront fee of $41.0 million. We are collaborating with Teva to further develop XEN402, 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, the majority of which relate to pre-commercial activities. If XEN402 is approved, we are also eligible to receive double-digit royalties on net sales of the licensed products.

We have an option to a minority co-promotion interest for products incorporating XEN402 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 NDA for a XEN402 product with the FDA and we will be obligated to pay an opt-in fee to Teva, which 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, 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 such product sales in the U.S. that is equal to our percent interest of detailing activities and co-promotion expenses.

Teva may terminate the agreement with 60 days advanced written notice to us after a pre-defined number of 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 receive licenses to Teva intellectual property relating to XEN402 clinical development and regulatory filings. If patents within such Teva intellectual property cover the XEN402 product, then Teva is eligible to receive royalties from us based on a percentage of net product sales, within the low single-digit range.

Pursuant to the terms of our agreement, we have the right to require 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. The number of common shares Teva 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 price to the public 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 price to the public 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 have not yet delivered the notice to Teva regarding the purchase of our common shares.

Agreement with Isis for XEN701

In November 2010, we entered into a collaboration and license agreement with Isis. We issued Isis a convertible, interest-bearing promissory note as payment of the $1.5 million upfront fee required by the agreement. In June

2013, we made this payment to Isis, including accrued interest, pursuant to the terms of the convertible promissory note. Under the terms of this agreement we 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. The option is exercisable until 30 days after the initiation of IND-enabling toxicology studies with a development candidate compound for the applicable target or November 2014, whichever is earliest. We collaborated with Isis on the research that led to the selection of XEN701 as the first drug to enter development under the collaboration. Each party bore its own expenses in conducting the research program under the Isis agreement.

In June 2013, we exercised our option and obtained an exclusive license to develop, manufacture and commercialize antisense products under the collaboration that target hepcidin. Under the terms of the agreement, we paid Isis an option exercise fee of $2.0 million. Upon the achievement of specific development and regulatory events we are obligated to pay to Isis milestone payments totaling up to $88.0 million and sales-based milestone payments totaling up to $60.0 million. In addition, Isis is eligible to receive royalties on net sales of licensed products by us and our affiliates, in the single-digit range. If we sublicense XEN701 to a third party for development or commercialization, then Isis is eligible to receive a percentage of our sublicensing revenue, including milestone payments and royalties we may receive from any sublicensee in lieu of some or all of the milestone payments and the royalties described above. The percentage Isis receives varies depending on the development or regulatory stage of XEN701 at the time such sublicense is granted.

We may terminate this agreement upon 90 days notice to Isis, and either party may terminate in the event of material breach by the other party that is not cured within 60 days of receipt of notice thereof.

Agreement with Genentech for Selective Inhibitors of Nav1.7

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, and we have subsequently earned a $5.0 million milestone payment for the selection of a product candidate for clinical development. 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 $621.0 million. In addition, we are eligible to receive royalties based on net sales of the products, which range from single to low double-digit range percentage for small-molecule inhibitors and a single-digit percentage for large-molecule inhibitors of Nav1.7.

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 Xenon, 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 Xenon to enable it to develop and commercialize certain terminated products outside of the collaboration.

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 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, 2013, 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 for a product directed to such 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 low double-digit range.

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, Europe 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 June 30, 2013, we owned, co-owned or licensed 61 issued U.S. patents and approximately 28 pending U.S. patent applications, including provisional and non-provisional filings. We also owned, co-owned or licensed an additional 687 pending and granted counterpart applications worldwide, including 151 country-specific validations of 13 European patents.

We have in-licensed from the University of British Columbia 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, pending U.S. Patent Application No. 13/850,203, and pending Canadian Patent Application No. 2,370,081. European Patent No. 1,200,117 and Japanese Patent No. 5,095,894 are expected to expire in June 2020 (absent any extensions of term); U.S. Patent Application No. 13/850,203 and Canadian Patent Application No. 2,370,081, if issued, are 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 lipoprotein lipase 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 June 30, 2013, we owned six issued U.S. patents and five pending U.S. patent applications related to XEN402, 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 11 foreign issued patents (exclusive of European patent national validation) and filed 109 corresponding applications in various foreign jurisdictions relating to XEN402.

We have in-licensed from Isis patent applications and one patent related to XEN701, and the use of such compositions in treating hepcidin-mediated conditions. These include one issued U.S. patent with claims directed to

methods of treating hepcidin-mediated conditions, as well as one pending U.S. patent application, and two pending counterpart European patent applications, directed to antisense compositions targeting hepcidin. The U.S. patent is expected to expire in 2028 (absent any extension of term), and any further allowances (worldwide) are expected to expire in 2027 (absent any extensions of term). In addition, a variety of core technology patents and patent applications have been in-licensed from Isis. These patents are generally directed to antisense compositions and methods of manufacture.

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 June 30, 2013, we had 52 employees 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 and 2012 and the six months ended June 30, 2013 were $12.2 million, $10.4 million and $6.9 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 and oligonucleotides, 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. In contrast, there are a limited number of companies that can produce oligonucleotides, like XEN701, with the quality and purity that we require for our development and future commercial efforts. Establishing relationships with alternative suppliers can be a lengthy process and might cause delays in our development efforts. 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.

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, 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.

XEN402 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 EM.

XEN701 Competition

Our competitors currently market well-known drugs and treatments for anemia, including ESAs such as epogen, and intravenous iron therapy. We are aware of clinical-stage development programs at several major pharmaceutical and biotechnology companies targeting hepcidin for the treatment of cancer associated with anemia, including Eli Lilly and Company and NOXXON Pharma AG. Other companies' clinical-stage development programs do not directly target hepcidin such as prolyl hydroxylase inhibitors and soluble hemojuvelin for the treatment of CKD and ESRD, including Astellas Pharma Inc., AstraZeneca plc, FerruMax Pharmaceuticals, Inc., FibroGen, Inc. and GlaxoSmithKline plc. Another clinical-stage therapy aims to treat anemia by administering iron via dialysate. We are not aware of any drugs or therapies currently approved for treating anemia by inhibiting the production of human hepcidin at the transcriptional level.

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, and certain of our large-molecule product candidates, such as XEN701, are regulated by the FDA as biologics. 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 a NDA for drug products or a Biologic License Application, or 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 10 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 10 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.

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. 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 10 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 Public Officials Act

The U.S. Foreign Corrupt Practices Act and the Canadian Corruption of 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.

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 10 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 10 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.

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 Affordable Care Act, 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, the Affordable Care Act 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 the Affordable Care Act, 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 the Affordable Care Act 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 the Affordable Care Act, 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 Affordable Care Act, 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 Affordable Care Act 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 receive or obtain 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 will require 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 30,600 square feet of office and laboratory space. The term of the lease expires in March 2022. We currently pay an aggregate of approximately $75,932 per month in base rent, property tax, common area maintenance fees and management fees, and the landlord holds a security deposit equal to approximately $87,382. 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 June 30, 2013, we had 71 employees, consisting of 65 full-time employees. Of our employees, 52 were primarily engaged in research and development activities, 23 of whom had an M.D. (or equivalent) or Ph.D. 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 June 30, 2013:

NAME	AGE	POSITION(S)
Executive Officers		
Simon Pimstone, M.B. ChB., Ph.D.	45	President, Chief Executive Officer and Director
Gary Bridger, Ph.D.	50	Executive Vice President of Research and Development
Karen G. Corraini, J.D.	58	General Counsel and Corporate Secretary
Y. Paul Goldberg, M.B. ChB., Ph.D.	53	Vice President of Clinical Development
Robin Sherrington, Ph.D.	52	Senior Vice President of Business & Corporate Development
Non-Employee Directors		
Michael Tarnow [1][2][3].	69	Chair of the Board
Mohammad Azab, M.B. ChB. [2][3].	57	Director
Johnston L. Evans [1]	65	Director
Michael Hayden, M.B. ChB., Ph.D.	61	Director
Frank Holler [1]	56	Director
Gary Patou, M.B. B.S., M.D. [2][3]	54	Director
Evan A. Stein, M.B. ChB., Ph.D.	66	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, or Board, 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, and is a member of the board of directors of Providence Health Care, a non-profit organization that provides health care services to British Columbia patients and residents. Dr. Pimstone also serves as director of the private biotechnology companies Enject Therapeutics Inc., Eupraxia Pharmaceuticals Inc. and Indel Therapeutics Inc. Our Board 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 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. Prior to joining us, Dr. Bridger was a Venture Partner at Venture West Capital Management, a venture capital firm that invests in early stage technology companies, from June 2010 until June 2012. Prior to Venture 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.

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 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.

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.

Directors

Michael Tarnow has served as chair of our Board 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 believes that Mr. Tarnow is qualified to serve on our Board because of his senior management experience in the biopharmaceutical industry and his knowledge and perspective on our business.

Mohammad Azab, M.B. ChB. has served as a member of our Board 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. Prior to joining Astex, he was with Intradigm Corporation, a developer of RNA interference (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 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 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 has served as a member of the board of directors of E2open, Inc., a publicly-traded software solutions provider, since June 2005. Mr. Evans holds a B.A. in Political Science from Boston University. Our Board believes that Mr. Evans' qualifications to serve on our Board include his extensive experience as a venture capital investor and a director of a public company.

Michael Hayden, M.B. ChB., Ph.D., FRCPC has served as a member of our Board 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 believes Dr. Hayden is qualified to serve our Board because of his scientific background and his extensive knowledge and perspective on our company.

Frank Holler, has served as a member of our Board 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 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 believes Mr. Holler is qualified to serve on our Board 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 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 believes that Dr. Patou's qualifications to serve on our Board 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 the board of directors include his senior management experience in our industry.

Board Composition and Risk Oversight

The board of directors is currently composed of eight members. 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 the board of directors pursuant a nomination process set forth in a shareholders agreement that will terminate upon the completion of this offering. The articles of continuance 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 10 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 2012 fiscal year, the board of directors met five times.

The board of directors has an active role, as a whole and also at the committee level, in overseeing the management of our risks. The 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 the 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. The board of directors believes its administration of its risk oversight function has not affected the 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 2013, the 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, the board of directors has determined that none of , representing 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. The board of directors also determined that (chair), and , who comprise our audit committee, (chair) and and who comprise our compensation committee, and and and 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, the board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances the board of directors deemed relevant in determining their independence, including the beneficial ownership of our shares by each non-employee director.

Board Committees

The 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 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 , and . 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, , 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 has determined that each of , and meet these heightened independence standards. Prior to the completion of this offering, the audit committee will operate under a written charter that satisfies the applicable standards of the SEC and NASDAQ.

During 2012, our audit committee met four 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 , and . 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. Prior to the completion of this offering, the compensation committee will operate under a written charter that satisfies the applicable standards of the SEC and NASDAQ.

During 2012, our compensation committee met twice.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee oversees and assists the 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 , and . Currently, no chair of the committee has been designated. 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. Prior to the completion of this offering, the nominating and corporate governance committee will operate under a written charter that satisfies the applicable standards of the SEC and NASDAQ.

During 2012, our nominating and corporate governance committee did not meet.

The board of directors may from time to time establish other committees.

Director Compensation

Pre-IPO Director Compensation Policies

In January 2012, the 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, the 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.

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 the board of directors.

Our 2012 director compensation policy further provides that each of our non-management directors receives:

(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 25,000 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 5,000 options for service as a director,
   - (ii) up to a maximum of 5,000 additional options for service on our audit committee and/or our compensation committee (or 10,000 additional options for service on both such committees),
   - (iii) up to a maximum of 5,000 additional options for service as chair of our audit committee or as chair of our compensation committee (or 10,000 additional options for service as chair on both such committees),
   - (iv) up to a maximum of 2,000 additional options for service as a member of our nominating and corporate governance committee and
   - (v) up to a maximum of 2,000 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 10,000 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, the 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 the board of directors for the year ended December 31, 2012. Dr. Pimstone, our president and chief executive officer, did not receive any additional compensation for service on the 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] ($)	TOTAL[1] ($)
Mohammad Azab [4]	10,000	7,065	—	17,065
Johnston L. Evans [4]	10,000	—	—	10,000
Michael R. Hayden [4][5]	1,250 [5]	35,889 [7]	307,264 [8]	344,403
Frank A. Holler [4]	10,000	18,841	25,000 [9]	53,841
Gary Patou [4]	6,250	4,710	—	10,960
Evan A. Stein [4]	8,750	2,355	—	11,105
Michael M. Tarnow [4][6]	12,000	18,806	36,789 [10]	67,595

(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 is 1.0006.

(2) Represents the aggregate grant date fair value of stock option awards granted in 2012. 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, 2012 and July 1, 2012, the dates of grant, which is 0.9833 and 0.9813, respectively.

(3) As of December 31, 2012, the below listed directors beneficially held outstanding options to purchase the number of common shares as follows: Dr. Azab (240,000 shares); Mr. Evans (zero shares); Dr. Hayden (550,000 shares, of which 252,500 shares are held by Dr. Hayden and 297,500 shares are held by Genworks Inc., Dr. Hayden's consulting company); Mr. Holler (502,000 shares); Dr. Patou (200,000 shares); Dr. Stein (40,000 shares); and Mr. Tarnow (422,000 shares).

(4) Non-Management Director.
(5) Dr. Hayden served as our Chief Scientific Officer until September 2012, and, accordingly, during that time period he did not receive compensation for attendance at meetings of the board of directors as a Non-Management Director.
(6) Chair of Board of Directors.
(7) Consists of (i) $11,963 in stock option awards to Dr. Hayden and (ii) $23,926 in stock option awards to Genworks Inc., Dr. Hayden's consulting company.
(8) Represents consulting fees paid to Genworks Inc., Dr. Hayden's consulting company, for services rendered through August 31 during the year ended December 31, 2012.
(9) Represents a $25,000 bonus which was paid on a discretionary basis and was related to the successful negotiation and entry into our collaboration with Teva.
(10) Consists of (i) a $25,000 bonus which was paid on a discretionary basis and was related to the successful negotiation and entry into our collaboration with Teva and (ii) $11,789 of reimbursable expenses in connection with attendance at meetings of the board of directors, including airfare, lodging, ground transportation, and meals.

Consulting Fees Paid to Genworks, Inc.

For the year ended December 31, 2012, we paid $307,264 in consulting fees to Genworks Inc., or Genworks. Genworks is controlled by Dr. Michael Hayden, one of our directors. These consulting fees were paid to Genworks in consideration of certain scientific consulting services provided by Dr. Hayden during this period, as more fully described in the section entitled "Certain Relationships and Related Party Transactions—Consulting Services Provided by Genworks, Inc."

Discretionary Bonus

For 2012, Messrs. Holler and Tarnow were awarded a discretionary bonus by our board of directors in connection with their involvement with the successful negotiation and execution of our collaborative agreement with Teva.

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."

Post-IPO Director Compensation Policy

In August 2013, the 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, the board of directors maintained the categories of management director, non-management director and chair of the board of directors.

Non-management directors and the chair of the board of directors will receive compensation in the form of equity and cash under the post-IPO director compensation policy, as described below.

Equity Compensation

Upon joining our board of directors, each non-management director (including the chair of our board of directors) will receive an option to purchase 25,000 of our common shares. At the beginning of each fiscal year starting with 2014, each non-management director (including the chair of our board of directors) will be granted an option to purchase 15,000 of our common shares.

In addition to the annual grant, the chair of our board of directors will receive an option to purchase 5,000 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 the 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.

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 shares underlying the additional annual grant made to the chair of our board of directors will vest as to all of the shares subject to such award on the one 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 the board of directors will receive an additional annual cash retainer of $25,000.

The chairs of the three standing committees of the 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 the 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 the 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, 2012, Drs. Azab and Patou and Mr. Tarnow served as members of the 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 intend to adopt a written code of business conduct and ethics 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."

EXECUTIVE COMPENSATION

2012 Summary Compensation Table

The following table provides information regarding the compensation of our named executive officers during the year ended December 31, 2012.

Name and Principal Position	YEAR	SALARY [1]	BONUS [1][2]	OPTION AWARDS [3]	NON-EQUITY INCENTIVE PLAN [1][4]	ALL OTHER COMPENSATION [1]	TOTAL [1]
Simon N. Pimstone President and Chief Executive Officer	2012	$366,371	$100,060	$ 71,778	$183,185	$18,519[5]	$739,913
Y. Paul Goldberg Vice President, Clinical Development	2012	278,365	25,015	9,495	83,507	14,072[6]	410,454
Tarek S. Mansour former Executive Vice President, Research & Development [8]	2012	279,531	—	46,355	111,813	10,275[7]	447,974

(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.

(2) The amounts in the "Bonus" column 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. All such amounts were paid in February 2013.

(3) Represents the aggregate grant date fair value of stock option awards granted in 2012. 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 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 and September 24, 2012, the dates of grant, which is 0.9833 and 1.0203, respectively.

(4) The amount represents payments earned in 2012 under the 2012 Compensation Program Bonus Plan, which were paid in February 2013 as discussed under the section titled ''Executive Compensation — 2012 Non-Equity Incentive Plan Payments".

(5) Of the total amount, (i) $616 represents life insurance premiums through our group extended benefit plan and (ii) $17,903 represents contributions to our registered retirement savings plan.

(6) Of the total amount, (i) $616 represents life insurance premiums through our group extended benefit plan and (ii) $13,456 represents contributions to our registered retirement savings plan.

(7) Of the total amount, (i) $1,863 represents life insurance premiums through our group extended benefit plan for coverage in both Canada and the U.S., (ii) $525 relocation expenses and (iii) $7,887 telecommuting expenses including hotel and airfare. The amounts representing relocation and telecommuting expenses were paid in U.S. dollars.

(8) In January 2013, Dr. Mansour resigned as Executive Vice President, Research & Development of the Company.

Non-Equity Incentive Plan Compensation

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 OPPORTUNITY [1]	ACTUAL AWARD AMOUNT
Simon N. Pimstone	$ 183,185	$ 183,185
Y. Paul Goldberg	$ 83,507	$ 83,507
Tarek S. Mansour	$ 111,813	$ 111,813

(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 2012 Compensation Program Bonus Plan provides our named executive officers with an annual incentive compensation payments subject to our achievement of our corporate performance goals and individual achievement. For 2012, our corporate-level goals included establishing proof-of-concept for topical XEN402, 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%; Dr. Goldberg, 100%; and Dr. Mansour, 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 goal/25% individual goal for Drs. Goldberg and Mansour and 100% corporate goal for Dr. Pimstone.

Discretionary Bonus

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.

Executive Employment Arrangements

Dr. Simon N. Pimstone

We entered into an employment agreement on December 7, 2004 with Dr. Pimstone, our President and Chief Executive Officer. The employment agreement is for an indefinite term. Dr. Pimstone's current annual base salary is CAD$380,779, and he is eligible for an annual incentive payment up to 50% of his base salary, subject to achievement of performance metrics. The employment agreement also provides for severance benefits if Dr. Pimstone is terminated without cause. We anticipate entering into an amended employment agreement with Dr. Pimstone prior to the completion of this offering, which we expect to provide enhanced severance and post-termination benefits. For details regarding our current obligations under such circumstances, please see "Termination Benefits" below.

Dr. Y. Paul Goldberg

We entered into an employment agreement on October 13, 2000 with Dr. Goldberg, our Vice President of Clinical Development. The employment agreement is for an indefinite term. Dr. Goldberg's current annual base salary is CAD$289,312, and he is eligible for an annual incentive payment up to 30% of his base salary, subject to achievement of performance metrics. The employment agreement also provides for severance benefits if Dr. Goldberg is terminated without cause. We anticipate entering into an amended employment agreement with Dr. Goldberg prior to the completion of this offering, which we expect to provide enhanced severance and post-termination benefits. For details regarding our current obligations under such circumstances, please see "Termination Benefits" below.

Dr. Tarek S. Mansour

We entered into an employment agreement on April 14, 2010 with Dr. Mansour, our former Executive Vice President, Research & Development. The employment agreement was for an indefinite term. Dr. Mansour's 2012 annual base salary was CAD$279,531, and he was eligible for an annual incentive payment up to 40% of his base salary, subject to achievement of performance metrics.

In January 2013, Dr. Mansour resigned as Executive Vice President, Research & Development of the Company.

Dr. Mansour's employment agreement provided that, for a period of one year following Dr. Mansour's termination of employment with us, he may not engage in certain activities in competition with our business activities or induce or attempt to influence, our employees from leaving us.

In addition, in connection with his departure, Dr. Mansour entered into a separation agreement and a consulting agreement. Pursuant to the terms of the separation agreement, Dr. Mansour received a lump sum cash payment of CAD$31,000 and his options continued to vest through June 30, 2013, subject to Dr. Mansour providing consulting services through that date. The separation agreement also contained a customary mutual waiver and release of claims.

Termination Benefits

Dr. Pimstone's agreement provides that we may terminate his employment without cause, if we give him twelve months' written notice, or a payment equal to twelve months' base salary only, or any equivalent combination of working notice and base salary in lieu of notice. In addition, the board of directors will, in good faith, negotiate the vesting terms of Dr. Pimstone's then unvested share options.

Dr. Goldberg's agreement provides that we may terminate his employment without cause, if we pay him eight months' base salary in lieu of notice.

Prior to the completion of this offering, we expect to enter into amended employment agreements with each of Drs. Pimstone and Goldberg providing for enhanced severance and post-termination benefits.

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 the end of 2012.

	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	75,000 (1)	—	1.25	12/31/2013
	10/1/2004	25,000 (1)	—	1.25	9/30/2014
	1/11/2005	75,000 (1)	—	1.25	1/10/2015
	8/1/2006	60,000 (1)	—	0.77	7/31/2016
	1/1/2008	50,000 (1)	—	0.77	12/31/2017
	6/27/2008	175,000 (3)	—	0.77	6/26/2018
	1/1/2009	45,000 (1)	—	0.77	12/31/2018
	9/1/2009	50,000 (1)	10,000 (1)	0.77	8/31/2019
	1/1/2010	22,500 (1)	7,500 (1)	0.77	12/31/2019
	1/1/2011	55,000 (1)	55,000 (1)	0.77	12/31/2020
	1/1/2012	— (1)	100,000 (1)	0.77	12/31/2021
	1/1/2012	— (1)	50,000 (1)	0.77	12/31/2021
Y. Paul Goldberg	1/1/2004	6,000 (1)	—	1.25	12/31/2013
	10/1/2004	5,000 (1)	—	1.25	9/30/2014
	1/11/2005	10,000 (4)	—	1.25	1/10/2015
	1/1/2006	2,000 (1)	—	1.25	12/31/2015
	1/1/2007	10,000 (1)	—	0.77	12/31/2016
	1/1/2008	5,000 (1)	—	0.77	12/31/2017
	1/1/2009	25,000 (1)	—	0.77	12/31/2018
	1/1/2010	22,500 (1)	7,500 (1)	0.77	12/31/2019
	7/2/2010	13,500 (2)	4,500 (2)	0.77	7/1/2020
	12/2/2010	13,611 (2)	6,389 (2)	0.77	12/1/2020
	1/1/2011	60,000 (1)	60,000 (1)	0.77	12/31/2020
	1/1/2011	26,667 (2)	13,333 (2)	0.77	12/31/2020
	1/1/2012	— (2)	10,000 (1)	0.77	12/31/2021
	1/1/2012	5,000 (2)	5,000 (2)	0.77	12/31/2021
Tarek S. Mansour	5/17/2010	100,000 (1)	50,000 (1)	0.77	5/16/2020
	5/17/2010	35,000 (5)	—	0.77	5/16/2020
	1/1/2011	10,000 (1)	10,000 (1)	0.77	12/31/2020
	1/1/2012	—	60,000 (1)	0.77	12/31/2021
	9/24/2012	—	50,000 (1)	0.55	9/23/2022

(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.

(3) Options vest over three 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 two 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.

(4) Options vest as follows: 25% of the shares vest on January 1, 2006, 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 on, and 12 months after, a change in control, then 100% of the then-unvested shares vest.

(5) Options vest as follows: 100% of the shares vest on January 1, 2011. 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

2013 Equity Incentive Plan

In August 2013, the board of directors adopted a 2013 Equity Incentive Plan, which we expect to be approved by our shareholders prior to the completion of this offering. The 2013 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. We do not expect to use the 2013 Equity Incentive Plan until after the completion of this offering. Our 2013 Equity Incentive Plan will provide for the grant of incentive share options, within the meaning of Section 422 of the Internal Revenue Code, to our employees and any parent and 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 parent and subsidiary corporations.

Our Plan permits the grant of share options or share awards of common shares to our directors, officers, employees and other persons as approved by our board of directors. The 2013 Equity Incentive Plan will continue in effect for a term of ten (10) years from the date adopted, unless terminated earlier as permitted under the 2013 Equity Incentive Plan's provisions.

Authorized Shares. We reserved a total of common shares for issuance pursuant to the 2013 Equity Incentive plan of which no awards are issued and outstanding. In addition, the shares reserved under our 2013 Equity Incentive Plan will also include (1) those shares reserved but unissued under our Stock Plan and (2) shares that otherwise would return to the Stock Plan as the result of expiration or termination of awards (provided that the maximum number of shares that may be added to the 2013 Equity Incentive Plan pursuant to (1) and (2) is common shares). The number of shares available for issuance under the 2013 Equity Incentive Plan will increase annually on the first day of each fiscal year beginning in 2014, equal to the least of:

- common shares;
- 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. The board of directors, or one or more committees appointed by the board of directors, will administer the 2013 Equity Incentive Plan. Subject to the provisions of our 2013 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 2013 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 the board of directors determines it is desirable to qualify transactions under the 2013 Equity Incentive Plan as exempt under Rule 16b-3 of the Exchange Act, such transactions will be structured to satisfy the requirements for exemption under Rule 16b-3. Subject to the provisions of our 2013 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 2013 Equity Incentive Plan and awards granted under it, to create, amend and revoke rules relating to the 2013 Equity Incentive Plan, including creating sub-plans, and to determine the terms of the awards, including the exercise price, the number of shares subject to each such award, 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 2013 Equity Incentive Plan. The exercise price of options granted under our 2013 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 10 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, if termination is due to death or disability, the option will remain exercisable for 365 days. 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 2013 Equity Incentive Plan. Subject to the provisions of our 2013 Equity Incentive Plan, the administrator determines the other terms of options.

Share Appreciation Rights. We may grant share appreciation rights under our 2013 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 10 years. After the termination of service of an employee, director or consultant, he or she may exercise his or her share appreciation right for the period of time stated in his or her agreement. However, in no event may a share appreciation right be exercised later than the expiration of its term. Subject to the provisions of our 2013 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 2013 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 2013 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 2013 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 2013 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. 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 2013 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 2013 Equity Incentive Plan provides that all outside directors will be eligible to receive all types of awards (except for incentive stock options) under the 2013 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 2013 Equity Incentive Plan. Our 2013 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 2013 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 2013 Equity Incentive Plan, the administrator will adjust the number and class of shares that may be delivered under the 2013 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 2013 Equity Incentive Plan.

Merger or Change in Control. Our 2013 Equity Incentive Plan provides that in the event of a merger or change in control, as defined under the 2013 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, restricted share units and share appreciation rights, if any, will vest fully and become immediately exercisable, all restrictions on his or her restricted shares will lapse, and all performance goals or other vesting requirements for his or her performance shares 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 2013 Equity Incentive Plan provided such action does not impair the existing rights of any participant. Our 2013 Equity Incentive Plan will automatically terminate in 2023, unless we terminate it sooner.

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 January

2013. In connection with this offering, we expect to terminate our Stock Plan with respect to any future grant of options; 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 7,373,338 shares. Any shares for which an option had been exercised are not included in determining whether the maximum number of 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 10 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 date this registration statement becomes effective, the time periods in (iii)(a) and (iii)(b) of the previous sentence shall be changed to 30 days. In no event may an option be exercised later than the expiration of its term. Our board of directors determined the remaining terms and conditions of an option, as the 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 (collectively, 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 or 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, 2010 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 intend to adopt a formal, written policy, which will become effective on the date of this prospectus, 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.

During the fiscal years ended December 31, 2010, 2011 and 2012, we incurred consulting fees to Genworks Inc., or Genworks, in the amount of $218,543, $278,622 and $307,264, 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 0.9713, 1.0117 and 1.0006, respectively. Genworks is controlled by Dr. Michael Hayden, one of our directors. These consulting fees were paid to Genworks in consideration of certain scientific consulting services provided by Dr. Hayden during this period.

Clinical and Regulatory Services Provided by Medpace, Inc.

During the fiscal years ended December 31, 2010, 2011 and 2012, we incurred contract research organization, or CRO, fees to Medpace, Inc., or Medpace, in the amount of $2,295,354, $876,474 and $150,915, respectively. Dr. Evan A. Stein, one of our directors, is an 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 five percent of the consolidated gross revenue of Medpace during any of these fiscal years.

Investor Rights Agreement

We have entered into an amended and restated investors’ rights agreement, dated December 6, 2006, 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 investors’ rights agreement.

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 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.

Requirements under the Canada Business Corporations Act

Pursuant to the Canada Business Corporations Act, or 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 June 30, 2013 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 39,586,986 common shares outstanding as of June 30, 2013. The percentage of beneficial ownership after this offering shown in the table is based on common shares outstanding after the closing of this offering, 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 June 30, 2013. 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)	5,972,378	15.1%	
Entities affiliated with Lipoterx L.P. (2)	4,207,811	10.6	
Entities affiliated with InterWest Partners (3)	3,734,882	9.4	
FMR LLC (4)	2,556,545	6.5	
Named Executive Officers and Directors			
Simon N. Pimstone (5)	1,735,657	4.3	
Y. Paul Goldberg (6)	261,750	*	
Tarek Mansour(7)	188,750	*	
Michael M. Tarnow (8)	629,615	1.6	
Mohammad Azab (9)	230,833	*	
Gary Bridger	—	*	
Karen Corraini (10)	258,076	*	
Johnston L. Evans (11)	1,800,873	4.6	
Michael Hayden (12)	1,742,053	4.4	
Frank A. Holler (13)	1,298,302	3.2	
Gary Patou (14)	215,889	*	
Robin Sherrington (15)	227,069	*	
Evan A. Stein (16)	4,250,150	10.7	
All current executive officers and directors as a group (13 persons) (17)	12,839,017	29.9	

* Indicates beneficial ownership of less than 1% of the total outstanding common shares.

(1) Consists of 5,972,378 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 4,207,811 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) 3,570,190 shares held by InterWest Partnership, LP ("IW7") and (ii) 289,835 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) 1,157,981 shares held by Fidelity Select Portfolios: Biotechnology Portfolio; (ii) 8,758 shares held by Fidelity Canadian Aggressive Fund; (iii) 700,955 shares held by Fidelity Canadian Growth Company Fund; and (iv) 688,851 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 1,157,981 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 1,157,981 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 1,398,564 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 1,398,564 shares and sole power to vote or to direct the voting of 1,398,564 shares owned by the institutional accounts managed by PGATC as reported above.

(5) Consists of (i) 934,615 shares held by Dr. Pimstone; (ii) 80,000 shares held by Dr. Pimstone's spouse; and (iii) 721,042 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

(6) Consists of (i) 21,000 shares held by Dr. Goldberg and (ii) 240,750 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

(7) Consists of 188,750 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

(8) Consists of (i) 240,115 shares held by Mr. Tarnow and (ii) 389,500 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

(9) Consists of 230,833 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

(10) Consists of (i) 10,000 shares held by Ms. Corraini and (ii) 248,076 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

(11) Consists of (i) 1,070,619 shares held by Chancellor V, L.P. ("Chancellor V"); (ii) 561,513 shares held by Chancellor V-A, L.P. ("Chancellor V-A"); and (iii) 168,741 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.

(12) Consists of (i) 577,971 shares held by Dr. Hayden; (ii) 247,939 shares held by Dr. Hayden's spouse; (iii) 114,843 shares held by Sandra J. Hayden, in trust for Anna R. Hayden for which Dr. Hayden's spouse serves as trustee; (iv) 114,843 held by Sandra J. Hayden, in trust for Gideon R. Hayden for which Dr. Hayden's spouse serves as trustee; (v) 114,843 held by Sandra J. Hayden, in trust for Jessica R. Hayden for which Dr. Hayden's spouse serves as trustee; (vi) 114,843 held by Sandra J. Hayden, in trust for Sarah R. Hayden for which Dr. Hayden's spouse serves as trustee; (vii) 192,125 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013 held by Dr. Hayden; and (viii) 263,646 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013 held by Genworks Inc.

(13) Consists of (i) 841,580 shares held by Mr. Holler and (ii) 456,722 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

(14) Consists of 215,889 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

(15) Consists of (i) 10,000 shares held by Dr. Sherrington and (ii) 217,069 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

(16) Consists of (i) the shares listed in footnote (2) above, which are held by Lipoterx L.P.; (ii) 4,700 shares held by the Stein Family LLC for which Dr. Stein serves as the managing member; and (iii) 37,639 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

(17) Consists of (i) 9,435,976 shares beneficially owned by our current executive officers and directors and (ii) 3,403,041 shares issuable upon exercise of options exercisable within 60 days of June 30, 2013.

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, Series B preferred shares, Series C preferred shares, Series D preferred shares and Series E preferred shares to convert into our common shares;
- all of our outstanding subscription rights will automatically convert into our common shares; and
- we will effect a -for- reverse share split of our common and preferred shares.

Share Capital

Outstanding Shares

As a result, upon closing of this offering, based on the common shares, preferred shares and subscription rights outstanding as of June 30, 2013, our authorized share capital will consist of an unlimited number of common shares, each without par value, of which 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, 2013, we had 6,339,591 common shares issuable pursuant to outstanding options, and we had approximately 324 record holders 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 CBCA, and 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 and voting rights, 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 B.C., which provides Genome B.C. with certain subscription rights upon certain funding payments. As of June 30, 2013, 69,356 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 investors' rights agreement, the holders of approximately common shares 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, % of 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 $4,756,500, 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 $475,650 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, 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 that raises gross proceeds of $40 million or more at a per share price of no less than $4.42, subject to adjustment for any share split, these rights of first refusal will terminate.

Corporate Governance

Under the Canada Business Corporations Act, or 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. Our by-laws require 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 day 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 2013 is CAD$344.0 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 nor by-laws 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) in general, amending our articles or by-laws; (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. The notice must include information on the business the shareholder intends to bring before the meeting.

In addition, our amended articles 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 shareholder actions 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 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 intend to apply to have our common shares approved for listing on The NASDAQ Global Market under the symbol “XENE.”

Transfer Agent and Registrar

The transfer agent and registrar for our common shares is . The transfer agent and registrar’s address is .

MATERIAL DIFFERENCES BETWEEN THE CANADA BUSINESS CORPORATION ACT AND THE DELAWARE GENERAL CORPORATE LAW

Our corporate affairs are governed by our articles of continuance and by-laws and the provisions of the Canada Business Corporation 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 that will be in effect upon the closing of this offering and our by-laws.

	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 Articles, dividends may be declared 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, such as 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 10% 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. Our By-laws provide 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 10 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 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 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 or former directors or persons acting, at our request, in such capacity of a body corporate of which we are or were a direct or indirect shareholder or creditor.	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, based on our shares outstanding as of June 30, 2013 and after giving effect to the conversion of all outstanding convertible preferred shares and the conversion of all subscription rights, of our common shares will be outstanding, or 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 will be freely tradable without restriction or further registration under the Securities Act unless held by our "affiliates," as that term is defined in Rule 144 under the Securities Act. The remaining 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:

- shares will be eligible for sale on the date of this prospectus; and
- 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 Cowen and Company, 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 Cowen and Company, 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 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 investors' rights agreement 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 sales 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 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 2013 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 of our common shares 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 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 2012 and we do not expect to be a PFIC in 2013, 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. Our U.S. counsel expresses no opinion with respect to our PFIC status and also expresses no opinion 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.

Medicare Tax

Certain U.S. Holders who are individuals, estates or trusts will be subject to a 3.8% 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 Medicare tax 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. 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 has entered into, with respect to the common shares, a "synthetic disposition agreement" or a "derivative forward agreement" as those terms are defined in the Canadian Tax Proposals (as defined below) contained in the Notice of Ways and Means Motion that accompanied the federal budget tabled by the Minister of Finance (Canada) on March 21, 2013. 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. 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 tax will generally be refunded to a corporate Canadian Resident Holder at the rate of $1 for every $3 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.

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. 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. 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. Income 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) 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 Losses" will generally apply to the Non-Resident of Canada Holder but any such Holder should consult its own tax advisor in this regard.

Eligibility for Investment

Based on the provisions of the Canadian Tax Act in force on the date hereof and the Canadian Tax Proposals, the common shares will be qualified investments for the purposes of the Canadian Tax Act at the time of their acquisition for trusts governed by registered retirement savings plans, or RRSPs, registered retirement income funds, or RRIFs, deferred profit sharing plans, registered education savings plans, registered disability savings plans and tax-free savings accounts, or TFSAs, each as defined in the Canadian Tax Act, or collectively, the Deferred Plans, provided that at that time the common shares are listed on a designated stock exchange (which currently includes the NASDAQ), within the meaning of the Canadian Tax Act.

Notwithstanding the foregoing, if the common shares are "prohibited investments" for a trust governed by a TFSA, an RRSP or a RRIF, the holder of such TFSA or the annuitant of such RRSP or RRIF, may be subject to a penalty tax under the Canadian Tax Act. The common shares will generally not be a "prohibited investment" for a particular trust governed by a TFSA, RRSP or a RRIF, provided the holder or annuitant, as the case may be, (i) deals at arm's length with us for purposes of the Canadian Tax Act, and (ii) does not have a "significant interest," within the meaning of the Canadian Tax Act, in (A) us or (B) any corporation, partnership or trust with which we do not deal at arm's length for purposes of the Canadian Tax Act. Canadian Tax Proposals released on December 21, 2012 propose to delete the condition in (ii)(B) above. Prospective investors should consult their tax advisors for advice as to whether the common shares will be "prohibited investments" in their particular circumstances.

Prospective subscribers who intend to hold the common shares in Deferred Plans are advised to consult their tax advisors.

UNDERWRITING

Subject to the terms and conditions set forth in the underwriting agreement, dated , 2013, among us and Jefferies LLC and Cowen and Company, 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, the respective number of common shares shown opposite its name below:

UNDERWRITERS	NUMBER OF SHARES
Jefferies LLC	
Cowen and Company, LLC	
Wells Fargo Securities, LLC	
RBC Capital Markets, LLC	
Total	

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. 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, and to contribute to payments that the underwriters may be required to make in respect of those liabilities.

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. The underwriters may allow, and certain dealers may reallow, a discount from the concession not in excess of $ per common share to certain brokers and dealers. After the offering, the initial public offering price, concession and reallowance to dealers may be reduced by the representatives. 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 $. We have also agreed to reimburse the underwriters for certain of their expenses in an amount up to $ as set forth in the underwriting agreement.

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. 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 intend to apply to have our common shares approved for listing 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 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 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.

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 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. In particular, an affiliate of RBC Capital Markets, LLC owns Series B preferred shares, Series E preferred shares and conversion rights for Series E preferred shares, which in the aggregate represent less than 5% of our common shares as adjusted to reflect the conversion of all outstanding preferred shares and subscription rights. The affiliate of RBC Capital Markets, LLC is not selling any shares in this offering, will not receive any of the net proceeds in this offering and is subject to the sale restrictions described above under "—No Sales of Similar Securities". 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. Jurisdictions

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 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 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, will act as Canadian counsel to the underwriters.

EXPERTS

The financial statements of Xenon Pharmaceuticals Inc. as of December 31, 2011 and 2012, and for the years then ended 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.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under 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, 2011 and 2012, and the related statements of operations, comprehensive income (loss), changes in redeemable convertible preferred shares and shareholders’ deficit, and cash flows for the years then ended. 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, 2011 and 2012 and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

/s/ KPMG LLP
Chartered Accountants

August 14, 2013
Vancouver, Canada

XENON PHARMACEUTICALS INC.

Balance Sheets

(Expressed in thousands of U.S. dollars except share data)

	DECEMBER 31, 2011	DECEMBER 31, 2012	JUNE 30, 2013	PRO FORMA JUNE 30, 2013 (unaudited)
Assets				
Current assets:				
Cash and cash equivalents	$ 13,928	$ 60,162	$ 49,812	$
Marketable securities	996	—	—	
Accounts receivable	11,415	392	763	
Prepaid expenses and other current assets	305	149	710	
Total current assets	26,644	60,703	51,285	
Property, plant and equipment, net	3,821	2,602	2,173	
Total assets	$ 30,465	$ 63,305	$ 53,458	$
Liabilities, Shareholders' Deficit and Redeemable Convertible Preferred Shares				
Current liabilities:				
Accounts payable	394	557	378	
Accrued expenses	1,209	1,624	1,469	
Deferred revenue	4,505	17,015	16,105	
Deferred tenant inducements	—	1	—	
Total current liabilities	6,108	19,197	17,952	
Deferred revenue, less current portion	6,599	29,637	20,065	
Deferred tenant inducements, less current portion	—	183	148	
Note payable	1,586	1,665	—	
Total liabilities	$ 14,293	$ 50,682	$ 38,165	$
Collaboration agreements (See Note 13)				
Commitments and contingencies (See Note 14)				
Redeemable convertible preferred shares:				
Series A Convertible Preferred shares, without par value; 5,860,000 authorized and 5,596,330 issued and outstanding at each of December 31, 2011 and 2012, and June 30, 2013 (unaudited), respectively, and no shares issued and outstanding pro forma (unaudited)	2,939	2,939	2,939	—
Series B Convertible Preferred shares, without par value; 5,000,000 authorized and 4,835,177 issued and outstanding at each of December 31, 2011 and 2012, and June 30, 2013 (unaudited), respectively, and no shares issued and outstanding pro forma (unaudited)	8,683	8,683	8,683	—
Series E Convertible Preferred shares, without par value; 21,242,673 authorized and 21,005,767 issued and outstanding at each of December 31, 2011 and 2012, and June 30, 2013 (unaudited), respectively, and no shares issued and outstanding pro forma (unaudited)	90,866	90,866	90,866	—
	102,488	102,488	102,488	—
Shareholders' deficit:				
Common shares, without par value; unlimited shares authorized; 6,436,055 and 6,467,510 and 6,488,141 issued and outstanding at December 31, 2011 and 2012, and June 30, 2013 (unaudited), respectively, and shares issued and outstanding pro forma (unaudited)	5,986	6,008	6,035	
Additional paid-in capital	28,772	29,164	29,457	
Accumulated deficit	(124,483)	(128,784)	(125,644)	
Accumulated comprehensive income	3,409	3,747	2,957	
Total shareholders' deficit	$ (86,316)	$ (89,865)	$ (87,195)	$
Total liabilities, shareholders' deficit and redeemable convertible preferred shares	$ 30,465	$ 63,305	$ 53,458	$

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	2012	2013
			(unaudited)	
Revenue				
Collaboration revenue	$ 6,915	$ 14,300	$ 8,207	$ 10,985
Royalties	3	8	3	—
	6,918	14,308	8,210	10,985
Operating expenses:				
Research and development	12,237	10,392	4,770	6,939
General and administrative	6,795	7,069	3,561	2,872
Total operating expenses	19,032	17,461	8,331	9,811
Income (loss) from operations	(12,114)	(3,153)	(121)	1,174
Other income (expense):				
Interest income	153	144	56	76
Interest expense	(91)	(93)	(46)	(41)
Foreign exchange gain (loss)	60	(169)	(143)	1,920
Gain (loss) on write-off and disposal of assets	—	(1,030)	(1,197)	11
Net income (loss)	(11,992)	(4,301)	(1,451)	3,140
Net income (loss) attributable to participating securities	—	—	—	(3,140)
Net income (loss) attributable to common shareholders	$ (11,992)	$ (4,301)	$ (1,451)	$ —
Net income (loss) per share attributable to common shareholders:				
Basic	$ (1.86)	$ (0.67)	$ (0.23)	$ 0.00
Diluted	$ (1.86)	$ (0.67)	$ (0.23)	$ 0.00
Weighted-average shares outstanding:				
Basic	6,433,423	6,451,782	6,443,374	6,477,826
Diluted	6,433,423	6,451,782	6,443,374	6,477,826
Pro forma net income (loss) per share attributable to common shareholders (unaudited):				
Basic		$ (0.11)		$ 0.08
Diluted		$ (0.11)		$ 0.07
Pro forma weighted-average shares outstanding (unaudited):				
Basic		39,535,661		39,576,671
Diluted		39,535,661		41,948,921

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	2012	2013
			(unaudited)	
Net income (loss)	$(11,992)	$(4,301)	$(1,451)	$3,140
Other comprehensive income (loss):				
Foreign currency translation adjustment	(293)	342	(6)	(790)
Unrealized gain (loss) on marketable securities measured at fair value	4	(4)	(4)	—
Comprehensive income (loss)	$(12,281)	$(3,963)	$(1,461)	$2,350

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 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 SHAREHOLDER'S DEFICIT
	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT	SHARES	AMOUNT				
Balance as of January 1, 2011	5,596,330	$ 2,939	4,835,177	$ 8,683	21,005,767	$ 90,866	6,430,791	$ 5,980	$ 28,328	$ (112,491)	$ 3,698	$ (74,485)
Net loss for the year	—	—	—	—	—	—	—	—	—	(11,992)	—	—
Unrealized gain on fair value of marketable securities	—	—	—	—	—	—	—	—	—	—	4	—
Cumulative translation adjustment	—	—	—	—	—	—	—	—	—	—	(293)	—
Stock option compensation expense	—	—	—	—	—	—	—	—	435	—	—	—
Subscription rights	—	—	—	—	—	—	—	—	12	—	—	—
Issuance of common shares on conversion of subscription rights	—	—	—	—	—	—	3,140	2	(2)	—	—	—
Issued pursuant to exercise of stock options	—	—	—	—	—	—	2,124	4	(1)	—	—	—
Balance as of December 31, 2011	5,596,330	$ 2,939	4,835,177	$ 8,683	21,005,767	$ 90,866	6,436,055	$ 5,986	$ 28,772	$ (124,483)	$ 3,409	$ (86,316)
Net loss for the year	—	—	—	—	—	—	—	—	—	(4,301)	—	—
Unrealized loss on fair value of marketable securities	—	—	—	—	—	—	—	—	—	—	(4)	—
Cumulative translation adjustment	—	—	—	—	—	—	—	—	—	—	342	—
Stock option compensation expense	—	—	—	—	—	—	—	—	406	—	—	—
Subscription rights	—	—	—	—	—	—	—	—	8	—	—	—
Issuance of common shares on conversion of subscription rights	—	—	—	—	—	—	31,455	22	(22)	—	—	—
Balance as of December 31, 2012	5,596,330	$ 2,939	4,835,177	$ 8,683	21,005,767	$ 90,866	6,467,510	$ 6,008	29,164	$ (128,784)	$ 3,747	$ (89,865)
Net loss for the period (unaudited)	—	—	—	—	—	—	—	—	—	3,140	—	—
Cumulative translation adjustment (unaudited)	—	—	—	—	—	—	—	—	—	—	(790)	—
Stock option compensation expense (unaudited)	—	—	—	—	—	—	—	—	273	—	—	—
Subscription rights (unaudited)	—	—	—	—	—	—	—	—	43	—	—	—
Issuance of common shares on conversion of subscription rights (unaudited)	—	—	—	—	—	—	15,631	23	(23)	—	—	—
Issued pursuant to exercise of stock options rights (unaudited)	—	—	—	—	—	—	5,000	4	—	—	—	—
Balance as of June 30, 2013 (unaudited)	5,596,330	$ 2,939	4,835,177	$ 8,683	21,005,767	$ 90,866	6,488,141	$ 6,035	$ 29,457	$ (125,644)	$ 2,957	$ (87,195)

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	2012	2013
			(unaudited)	
Operating activities:				
Net income (loss)	$(11,992)	$ (4,301)	$ (1,451)	$ 3,140
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:				
Depreciation and amortization	1,132	786	614	372
Gain (loss) on write-off and disposal of assets	—	1,030	1,197	(11)
Stock-based compensation	435	406	204	273
Non-cash expense on issuance of subscription rights	12	8	6	43
Interest accrued on note payable	78	77	40	35
Deferred tenant inducements	—	183	—	(27)
Foreign exchange loss (gain)	(88)	(34)	(17)	33
Changes in operating assets and liabilities:				
Accounts receivable	(11,008)	11,230	8,852	(423)
Prepaid expenses, and other current assets	(107)	162	191	(589)
Accounts payable and accrued expenses	(354)	540	(638)	(195)
Deferred revenue	8,203	35,486	(2,852)	(8,265)
Net cash provided by (used in) operating activities	(13,689)	45,573	6,146	(5,614)
Investing activities:				
Purchases of property, plant and equipment,	(290)	(526)	(93)	(68)
Sale of property, plant and equipment	—	7	—	—
Proceeds from marketable securities	14,179	1,010	1,003	—
Net cash provided by (used in) investing activities	13,889	491	910	(68)
Financing activities:				
Note payable	—	—	—	(1,701)
Proceeds from issuance of common shares	2	—	—	4
Net cash provided by (used in) financing activities	2	—	—	(1,697)
Effect of exchange rate changes on cash and cash equivalents	(314)	170	(122)	(2,971)
Increase (decrease) in cash and cash equivalents	(112)	46,234	6,934	(10,350)
Cash and cash equivalents, beginning of period	14,040	13,928	13,928	60,162
Cash and cash equivalents, end of period	$ 13,928	$60,162	$20,862	$ 49,812
Supplemental information:				
Non-cash transactions:				
Fair value of stock options transferred from additional paid-in capital to share capital on exercise	$ 1	—	—	—
Issuance of common shares on conversion of subscription rights	$ 2	$ 22	$ 11	$ 2
Interest paid	$ (13)	$ (16)	$ (6)	$ (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:

Description of business:

(a) 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 biopharmaceutical company focused on the development of novel medicines through the application of the Company’s proprietary discovery platform, which it refers to as Extreme Genetics.

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.

The accompanying financial statements are prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”).

These financial statements are presented in U.S. dollars.

(b) Unaudited interim financial Information:

The accompanying balance sheet as of June 30, 2013, statements of operations, comprehensive income (loss) and of cash flows for the six months ended June 30, 2012 and 2013, and the statement of changes in redeemable convertible preferred shares and shareholders’ deficit for the six months ended June 30, 2013 are unaudited. The interim unaudited financial statements have been prepared on the same basis as the annual audited financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair statement of the Company’s financial position as of June 30, 2013 and the results of its operations, its comprehensive income (loss) and its cash flows for the six months ended June 30, 2012 and 2013. The financial data and other information disclosed in these notes related to the six months ended June 30, 2012 and 2013 are unaudited. The results for the six months ended June 30, 2013 are not necessarily indicative of results to be expected for the year ending December 31, 2013, any other interim periods, or any future year or period.

(c) 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 9) will automatically convert into common shares. The accompanying unaudited pro forma balance sheet as of June 30, 2013 has been prepared to give effect to (i) the automatic conversion of all of the outstanding redeemable convertible preferred shares, plus additional applicable conversion rights, into 33,029,489 common shares, converted on a 1:1 basis and (ii) the exchange of all outstanding subscription rights into common shares as though the proposed IPO had occurred on June 30, 2013. Unaudited pro forma basic and diluted net income (loss) per share attributable to common shareholders for the year ended December 31, 2012 and the six months ended June 30, 2013 has been prepared to give effect to (i) the automatic conversion of all of the outstanding redeemable convertible preferred shares, plus additional applicable conversion rights, into 33,029,489 common shares, converted on a 1:1 basis and (ii) the exchange of all outstanding subscription rights into common shares as though the proposed IPO had occurred on January 1, 2012.

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 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, 2011 and 2012, and June 30, 2013 (unaudited).

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):

(f) Concentration of credit risk and of significant collaborators:

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist primarily of cash and cash equivalents and accounts receivable. Cash and cash equivalents are invested through banks and other financial institutions in the U.S. 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.

Accounts receivable are unsecured and primarily represent amounts due from our pharmaceutical collaborators. Accordingly, the Company may be exposed to credit risk generally associated with pharmaceutical companies or specific to the collaboration agreements with Teva, Genentech and Merck. 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 revenue were as follows:

	YEAR ENDED DECEMBER 31,		SIX MONTHS ENDED JUNE 30, 2013
	2011	2012	(unaudited)
Genentech	—	$ 6,948	$ 3,916
Merck	$ 6,389	5,562	—
Teva	—	—	6,901

(g) Financial instruments and fair value:

Marketable securities

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.

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.

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):

Cash equivalents and marketable securities 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.

(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 2011, 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 11. 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 a net loss attributable to common shareholders for each of the years ended December 31, 2011 and 2012 and for the six months ended June 30, 2012 (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 share attributable to common shareholders is computed by dividing the diluted net income (loss) attributable to

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):

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. Diluted net loss per share attributable to common shareholders is the same as basic net loss per share attributable to common shareholders for each of the years ended December 31, 2011 and 2012 and for the six months ended June 30, 2012 (unaudited).

(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.

3. Recent Accounting Pronouncements:

In May 2011, in an effort to assist in the convergence of U.S. GAAP and International Financial Reporting Standards ("IFRS"), the FASB issued an ASU related to "Fair Value Measurements: Amendments to Achieve Common Fair Value Measurements and Disclosure Requirements in U.S. GAAP and IFRSs." The standard expands existing disclosure requirements for fair value measurements and makes certain other amendments, including a requirement to categorize, by level in the fair value hierarchy, items that are required to be disclosed, but not measured, at fair value. The standard is effective for fiscal years, and interim periods within those years, beginning after December 15, 2011, and should be applied prospectively. The Company adopted this standard as of January 1, 2012 and its adoption did not have a material effect on the Company's financial statements for the year ended December 31, 2012.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

4. 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, 2011			
	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3
Assets				
Cash and cash equivalents	$ 13,928	$ 13,928	—	—
Marketable securities	996	996	—	—
Total	$ 14,924	$ 14,924	—	—

	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 JUNE 30, 2013			
	TOTAL	LEVEL 1	LEVEL 2	LEVEL 3
		(unaudited)		
Assets				
Cash and cash equivalents	$ 49,812	$ 49,812	—	—
Total	$ 49,812	$ 49,812	—	—

The Company's Level 1 assets include marketable securities with quoted prices in active markets.

The marketable securities are classified as available-for-sale investments with an amortization cost of $992 and fair value of $996 at December 31, 2011. The unrealized gain of $4 is reported in other comprehensive income. The security matured on January 3, 2012 with final proceeds of $996 received.

5. Accrued Expenses:

Accrued expenses consisted of the following:

	DECEMBER 31,		JUNE 30,
	2011	2012	2013
			(unaudited)
Employee compensation, benefits and related accruals	$ 699	$ 1,111	$ 359
Consulting and contracted research	210	236	420
Professional fees	291	233	634
Other	9	44	56
Total	$ 1,209	$ 1,624	$ 1,469

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

6. Property, Plant and Equipment:

Property, plant and equipment consisted of the following:

	DECEMBER 31, 2011	DECEMBER 31, 2012	JUNE 30, 2013 (unaudited)
Research equipment	$ 6,872	$ 7,354	$ 7,027
Office furniture and equipment	1,619	1,144	1,083
Computer equipment	2,051	1,915	1,812
Leasehold improvements	10,538	7,296	6,905
Less: accumulated depreciation and amortization	(17,259)	(15,107)	(14,654)
Total	$ 3,821	$ 2,602	$ 2,173

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 and $786 for the years ended December 31, 2011 and 2012, respectively, and was $614 and $372 for the six months ended June 30, 2012 and 2013 (unaudited), respectively.

7. 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, 2012 of $46,652 is expected to be realized as revenue as follows:

YEAR ENDING DECEMBER 31,	
2013	$ 17,015
2014	16,931
2015	12,706
Deferred revenue	$ 46,652

8. 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-homojuvelin 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.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

8. Note Payable (continued):

At December 31, 2012, the note payable balance is comprised of the principal of $1,500 (2011—$1,500) and accrued interest of $165 (2011—$86).

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 product rights under the collaboration with Isis (unaudited).

9. 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, stock dividends and the like 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.

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 December 31, 2012, a total of 1,592,215 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, dividend (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, 2012 and June 30, 2013 (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

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

9. Redeemable Convertible Preferred Shares (continued):

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.

10. Subscription Rights:

At December 31, 2012, the Company had 54,390 (2011—74,055) subscription rights outstanding to Genome BC (See Note 13(a)). During the year ended December 31, 2012, 31,455 (2011—3,140) subscription rights were converted by Genome BC to an equal number of common shares.

During the six months ended June 30, 2013, 30,597 additional subscription rights were issued to Genome BC and 15,631 subscription rights were converted to an equal number of common shares, thus leaving 69,356 subscription rights outstanding to Genome BC as of June 30, 2013 (unaudited).

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$10.64; (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.

11. 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 both December 31, 2011 and 2012, the Company was authorized to grant up to 6,531,977 options under the Plan. In January 2013, the Plan was amended and restated to increase the maximum number of options under the Plan to 7,373,338 (unaudited). The Plan is administered by the Board and exercise prices, vesting and other restrictions are all determined at their discretion.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

11. Stock Option Plan (continued):

Summary of stock option activity is as follows:

	NUMBER OF OPTIONS	WEIGHTED-AVERAGE EXERCISE PRICE		WEIGHTED-AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	AGGREGATE INTRINSIC VALUE U.S.$
		CAD$	U.S.$		
Outstanding, January 1, 2011	5,105,162	0.90	0.90		
Granted	1,166,250	0.77	0.78		
Exercised	(2,124)	0.74	0.75		
Forfeited and expired	(1,120,067)	0.82	0.83		
Outstanding, December 31, 2011	5,149,221	0.88	0.87	6.07	
Granted	729,500	0.75	0.75		
Forfeited and expired	(394,515)	1.08	1.08		
Outstanding, December 31, 2012	5,484,206	0.85	0.86	5.81	
Granted	1,214,150	0.55	0.53		
Exercised	(5,000)	1.25	1.23		
Forfeited and expired	(353,765)	1.00	0.98		
Outstanding, June 30, 2013 (unaudited)	6,339,591	0.79	0.75	6.24	7,354

The following table summarizes the stock options outstanding and exercisable at December 31, 2011, 2012 and June 30, 2013 (unaudited):

	OPTIONS OUTSTANDING				OPTIONS EXERCISABLE		
EXERCISE PRICES CAD$	NUMBER OF OPTIONS	WEIGHTED-AVERAGE REMAINING OPTION LIFE (YEARS)	WEIGHTED-AVERAGE EXERCISE PRICE		NUMBER OF OPTIONS	WEIGHTED-AVERAGE EXERCISE PRICE	
			CAD$	U.S.$		CAD$	U.S.$
December 31, 2011							
0.77	3,885,571	7.18	0.77	0.76	2,377,773	0.77	0.76
1.25	1,263,650	2.50	1.25	1.23	1,263,650	1.25	1.23
	5,149,221	6.07	0.88	0.87	3,641,423	0.94	0.92
December 31, 2012							
0.55	68,250	9.76	0.55	0.55	—	—	—
0.77	4,404,056	6.76	0.77	0.77	3,128,294	0.77	0.77
1.25	1,011,900	1.45	1.25	1.26	1,011,900	1.25	1.26
	5,484,206	5.81	0.85	0.86	4,140,194	0.88	0.88
June 30, 2013 (unaudited)							
0.55	1,231,400	9.52	0.55	0.52	16,382	0.55	0.52
0.77	4,291,441	6.33	0.77	0.73	3,553,724	0.77	0.73
1.25	816,750	1.52	1.25	1.19	816,750	1.25	1.19
	6,339,591	6.24	0.79	0.75	4,386,856	0.86	0.82

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

11. 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	2012	2013
			(unaudited)	
Risk-free interest rate	2.36%	1.14%	1.15%	1.03%
Expected term (in years)	6.2	6.2	6.2	6.2
Expected volatility	70%	70%	70%	70%
Expected dividend yield	—	—	—	—

The weighted-average fair value of options granted during the six months ended June 30, 2013 was, $0.83 (unaudited), and the weighted-average fair value of options in 2012 was $0.47 (2011—$0.49) per option.

As of June 30, 2013, the unrecognized stock-based compensation cost related to the non-vested stock options was $1,192 (unaudited) and December 31, 2012 and December 31, 2011 was $633 and $693 respectively, which is expected to be recognized over a weighted-average period of 2.8 years (2012—2.2 years; 2011—2.5 years).

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	2012	2013
			(unaudited)	
Research and development	$ 145	$ 112	$ 58	$ 70
General and administrative	290	294	146	203
Total	$ 435	$ 406	$ 204	$ 273

12. Financial Risks:

(a) Foreign Currency Exchange Risk:

At December 31, 2012, the Company had U.S. dollar denominated cash and cash equivalents of $51,100 (2011—$8,100) and Canadian denominated cash and cash equivalents and marketable securities of CAD$9,000 (2011—CAD$6,900).

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

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

12. Financial Risks (continued):

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:

The Company had cash and cash equivalents of $60.2 million as of December 31, 2012, which consisted of bank deposits. 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 June 30, 2013 (unaudited).

13. 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 pre-clinical 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.

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.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

13. Collaboration Agreements (continued):

Commercialization milestone payments may include annual product sales that achieve pre-specified thresholds.

(a) Genome BC collaboration agreement:

In January 2009, the Company entered into a research funding agreement with Genome BC. 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 will terminate in 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 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$10.64; (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, 2012, Genome BC had subscription rights exchangeable for 54,390 common shares. As of June 30, 2013, 69,356 such subscription rights remain outstanding (unaudited). See Note 10 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 provided by Genome BC will become repayable by the Company within 60 days of such filing. As of June 30, 2013, Genome BC has provided $2,359 in research funding to the Company, of which one-half (or $1,179) 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, 2013, the Company determined such an event continues to be unlikely (unaudited).

(b) Merck Sharp & Dohme GmbH (formerly known as Merck Sharp & Dohme Research Ltd.), 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 to conduct 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 its FTEs who performed the Company's activities pursuant to the research program conducted under the Merck 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.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

13. Collaboration Agreements (continued):

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 made a further payment to the Company of $2,000. 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.

Under the agreement with Merck, the Company is entitled to research, development and regulatory milestone payments of up to $64,000, per target, for products directed to such licensed product and also to receive royalties on future product sales at percentages between the mid to high single-digit range and the high single digit to low double-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 all other potential milestone payments under this agreement to be 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 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, the maximum eligible milestone payments due to the Company increase from $64,000 to $86,500 and the royalties increase from the mid to high single-digit range to the high single-digit to low double-digit range. Through both December 31, 2012 and June 30, 2013 (unaudited), the Company has not yet exercised any such co-funding option.

Merck has the right to terminate the agreement upon providing notice to the Company. Each of Merck and the Company may terminate the agreement in the event of a material breach by the other that remains uncured for 90 days after notice of such breach. In the event that Merck terminates the agreement for a breach by the Company, then the licenses granted to Merck by the Company survive and become fully paid up. In the event that the Company terminates the agreement due to a breach by Merck, then the licenses previously granted to Merck terminate.

(c) Isis Pharmaceuticals, Inc. (“Isis”) collaboration and licensing agreement:

In November 2010, the Company entered into a collaboration and license agreement with Isis to develop and commercialize antisense products targeting hepcidin and/or hemojuvelin. Upon signing of the agreement, the Company issued a convertible promissory note to Isis as payment of an upfront fee of $1,500, which was accounted for as a research and development expense. The promissory note was paid in full in cash in June 2013 along with accrued interest. Under the terms of the agreement, Isis and the Company were responsible for their own costs related to the initial research program. Upon the identification of a development candidate and initiation of IND-enabling toxicology studies, the Company has the option to exclusively license the worldwide development and commercialization rights for these antisense products from Isis. In addition to license and option fees, Isis will be eligible to receive development and regulatory-based milestone payments of up to $88,000, sales-based milestone payments of up to $60,000 and royalties on sales of such antisense products licensed to the Company under the collaboration or of any sublicense revenue received by the Company. During the six months ended June 30, 2013, the Company exercised an option to an exclusive license to develop, manufacture and commercialize antisense products under the collaboration targeting hepcidin and paid Isis an option fee of $2,000 which was accounted for as a research and development expense for the period (unaudited).

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.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

13. Collaboration Agreements (continued):

(d) 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 for the potential treatment of pain. Under the terms of this agreement, Genentech has an exclusive license to compounds and a non-exclusive license to diagnostics from the Company for development and commercialization of such products.

The Company received an upfront payment of $10,000 and Genentech is providing certain research funding to the Company for an initial term of three years ending December 2014. 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 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 Genentech. 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 research, development and commercialization milestone payments totaling up to $626,000 for multiple products and indications. In addition, the Company is eligible to receive royalties on sales of products resulting from the collaboration, which range from single to low double-digits range percentage for small-molecule inhibitors and single-digit percentage for large-molecule inhibitors of Nav1.7. The Company believes that all potential milestone payments under this agreement to be 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. As of both December 31, 2012 and June 30, 2013 (unaudited), no such milestone payments have been recognized.

Genentech may terminate the agreement with three months notice anytime on or after the third anniversary of the agreement. Both Genentech and the Company may terminate the agreement in the event of a material breach by the other that remains uncured for 90 days. In the event that Genentech terminates the agreement for a breach by the Company, then Genentech retains its licenses granted under the agreement and the payment obligations of Genentech to the Company are reduced. In the event that the Company terminates the agreement for a breach by Genentech, previous licenses granted to Genentech will revert back to the Company except for certain rights to make and use certain large molecule product candidates which will be retained by Genentech.

(e) Teva Pharmaceutical Industries Ltd. ("Teva") collaborative development and license agreement:

In December 2012, the Company entered into a collaborative development and license agreement for with Teva, through its subsidiary, Ivax International GmbH, under which Teva was granted an exclusive license to develop and commercialize certain products, including XEN402, and a non-exclusive license to develop and commercialize companion diagnostics to those products.

Under the terms of the agreement, the Company received an upfront fee of $41,000. Teva is responsible for all ongoing development costs with respect to developing XEN402 and other licensed products, including providing certain research funding to the Company over an initial term of three years ending December 2015. 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 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 Teva.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

13. Collaboration Agreements (continued):

Therefore, the Company has determined that the various deliverables under this agreement should be considered as one 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, Teva is obligated to pay the Company development, regulatory, and sales-based milestone payments totaling up to $335,000. The Company is eligible to receive double-digit royalties payable on net sales of licensed products. 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. As of June 30, 2013, no such milestone payments have been recognized (unaudited).

The Company has an option to a minority co-promotion interest for products incorporating XEN402 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 XEN402 product with the FDA and the Company will be obligated to pay an opt-in fee to Teva, which 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 share of operating profits from such product sales in the U.S. that is equal to the Company's percent interest of detailing activities and co-promotion expenses.

If the Company exercises this co-promotion option, the Company will be obligated to pay an opt-in fee to Teva that is calculated by multiplying the Company's co-promotion interest (as a percentage) by the amount of certain milestone payments paid or payable by Teva, to which is added certain past and future development costs on such product incurred by Teva with respect to the product for the U.S. The 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.

Under the agreement, the Company has the right to require Teva, upon written notice, to purchase the Company's common shares issued in an IPO if Teva has commenced a Phase 2b clinical trial of any licensed product under this agreement and if certain minimum price per share and gross proceed thresholds are met in connection with such offering. The number of shares that Teva would be required to purchase in an IPO upon receipt of such notice would equal to the lesser of:

- $20,000 divided by the IPO price of common shares if the IPO occurs on or after the date Teva commences a Phase 3 clinical trial of any licensed product;
- $10,000 divided by the IPO price of common shares if the 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 an IPO; and
- a number of shares specified by the Company in a written notice to Teva.

Teva may terminate the agreement upon 60 days notice to the Company after a pre-defined number of 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 Teva or the Company may terminate the agreement in the event of the other's breach which remains uncured for 90 business days. Under certain circumstances, the Company receives licenses to Teva intellectual property relating to XEN402 development and regulatory filings in the event of termination.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

13. Collaboration Agreements (continued):

(f) uniQure Biopharma B.V. ("uniQure") sublicense and research agreement:
Effective August 2000, the Company entered into a sublicense and research agreement with Amsterdam Molecular Therapeutics ("AMT") pursuant to which the Company granted to AMT an exclusive, worldwide sublicense under certain intellectual property. uniQure subsequently acquired certain assets of AMT including the rights to the intellectual property under this sublicense. Under the terms of the agreement, the Company is eligible to receive upfront fees and milestone payments of which CAD$575 has been received and fully recognized as revenue as of June 30, 2013 (unaudited).

The Company is eligible to receive certain additional milestone payments of CAD$200 related to the first product developed under this sublicense, Glybera, and CAD$600 for each subsequent product developed under the sublicense. 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 by uniQure and its affiliates, and other payments. The royalty rates are reduced to a low single-digit when the licensed patents expire. The Company, in turn, has certain payment obligations to its licensor, the University of British Columbia, based on amounts received from uniQure or otherwise based on the exploitation of the licensed intellectual property.

In June 2013, uniQure granted a sublicense to commercialize Glybera to Chiesi Farmaceutici S.p.A. ("Chiesi") in certain countries. The Company is eligible to receive a double-digit percentage of all non-royalty compensation received by uniQure relating to the technology or products licensed by the Company. In addition, for the duration of time that the licensed patents cover Glybera, the Company is eligible to receive a double-digit percentage of any royalties paid to uniQure by Chiesi, which are based on the greater of a double-digit percentage of Chiesi's net sales of Glybera or Chiesi's fully-loaded cost of goods plus a double-digit mark-up for each patient dose sold. Upon expiration of the patents and continuing until 10 years have elapsed from the date of Chiesi's first sale of Glybera, the Company is further eligible to receive a mid single-digit percentage of any such royalties paid to uniQure by Chiesi.

Pursuant to the terms of the Company's agreement with the University of British Columbia, the Company must pay to the University of British Columbia a single digit percentage of amounts the Company receives from sales of Glybera.

Also, 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 a single digit percentage of net sales for products the Company sells directly and a single digit percentage of royalties received for sales on products under the gene program or pain program.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

13. Collaboration Agreements (continued):

The following table is a summary of the revenue recognized from the Company's collaborations for each of the years ended December 31, 2011 and 2012 and for each of the six months ended June 30, 2012 and 2013 (unaudited):

	YEAR ENDED DECEMBER 31,		SIX MONTHS ENDED JUNE 30,	
	2011	2012	2012	2013
			(unaudited)	
uniQure:				
Milestone payment	—	$ 198	—	—
Teva:				
Recognition of upfront payment	—	927	—	$ 6,607
Research funding	—	—	—	294
Genentech:				
Recognition of upfront payment	$ 94	3,431	$1,685	1,659
Research funding	93	3,517	1,647	2,257
Merck:				
Recognition of initial milestone payment	2,145	1,060	1,054	—
Option fee	—	2,060	2,047	—
Research funding	3,206	2,442	1,688	—
Milestone payment	1,038	—		—
Genome BC:				
Research funding	339	665	86	168
Total collaboration revenue	$6,915	$14,300	$8,207	$10,985

14. 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, 2012 was $1,017 (2011—$1,601). Lease expense for the six months ended June 30, 2013 was $425 (2012—$653) (unaudited).

Future minimum annual lease payments under existing operating lease commitments are as follows:

YEAR ENDING DECEMBER 31,	
2013	$ 924
2014	930
2015	930
2016	930
2017	966
2018 and thereafter	4,104
Total	$ 8,784

XENON PHARMACEUTICALS INC.

Notes to Financial Statements

(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

14. Commitments and Contingencies (continued):

(b) Guarantees and indemnifications:

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.

15. 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% (2011 – 26.5%) to loss before income taxes as shown in the following table:

	2011	2012
Computed taxes at Canadian federal and provincial tax rates	$ (3,178)	$ (1,075)
Change in valuation allowance	1,910	2,710
Investment tax credits earned	(1,804)	(1,418)
Tax attributes expired	2,720	(356)
Future tax rate reductions	249	—
Non-deductible expenditures	113	107
Other reconciling items	(10)	32
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:

	2011	2012
Deferred income tax assets		
Investment tax credits	$ 21,025	$ 19,063
Scientific research and experimental development pool	16,508	17,873
Deferred revenue	2,776	11,663
Non-capital losses	7,070	2,122
Property, plant and equipment	1,728	2,112
Other	499	596
Less—valuation allowance	(49,606)	(53,429)
Net deferred income tax assets	$ —	$ —

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

15. Income Taxes (continued):

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, 2012, the Company has unclaimed tax deductions for scientific research and experimental development expenditures of $71,490 (2011—$66,032) with no expiration date.

At December 31, 2012, the Company has $16,180 (2011—$17,163) of investment tax credits available to offset federal taxes payable and $6,928 (2011—$8,153) of provincial tax credits available to offset provincial taxes payable in the future.

At December 31, 2012, the Company has non-capital losses carried forward for tax purposes, which are available to reduce taxable income of future years of approximately $8,489 (2011—$28,223).

The investment tax credits and loss carry forwards expire over various years to 2032.

As of December 31, 2012, the total amount of the Company's unrecognized tax benefits were $6,400 (2011—$1,300). 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:

	2011	2012
Balance as of January 1	—	$ 1,268
Increases related to current year positions	$ 1,268	5,082
Balance as of December 31	$ 1,268	$ 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, 2012 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.

XENON PHARMACEUTICALS INC.

Notes to Financial Statements
(Expressed in thousands of U.S. dollars except share and per share figures) (continued)

16. Related Parties:

A director of the Company, is the president and principal beneficial shareholder of Genworks, Inc. ("Genworks"), a company that provides services to the Company pursuant to a consulting agreement.

The Company recorded consulting expenses for services provided by Genworks in the amount of $279 for the year ended December 31, 2011, $307 for the year ended December 31, 2012 and none for the six months ended June 30, 2013 (unaudited).

As of December 31, 2012, $167 (2011—$71) included in accrued expenses related to services provided by Genworks.

During the fiscal years ended December 31, 2011 and 2012, the Company incurred contract research organization fees to Medpace, Inc. ("Medpace") in the amount of $876 and $151, respectively. One of the Company's directors is an equityholder and former director of Medpace. These consulting fees were paid to Medpace in consideration of certain pre-clinical and non-clinical drug development services provided by Medpace during this period by individuals other than the Company's director. The Company is not currently party to a consulting agreement with Medpace.

17. Subsequent Events:

On August 1, 2013, the Company granted 207,000 stock options under its Plan pursuant to an employment agreement entered into with an individual who is scheduled to assume the position of chief financial officer by November 1, 2013. Each stock option entitles the holder the right to purchase one common share at an exercise price of $1.91. The options vest in the amount of 25% on the one year anniversary date of the grant, then 75% vesting thereafter over the course of the following 4 years, in equal amounts, on the last day of each month.

Under the terms of the collaborative research and license agreement between the Company and Genentech, on August 7, 2013, the Company earned a $5,000 milestone payment from Genentech following Genentech's internal approval of a program to begin IND-enabling toxicology studies.

Shares

Common Shares

PRELIMINARY PROSPECTUS

Joint Book-Running Managers

Jefferies
Cowen and Company

Co-Managers

Wells Fargo Securities
RBC Capital Markets

, 2013

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	$ *
FINRA Filing Fee	*
The NASDAQ Global Market Listing Fee	*
Printing and Engraving Expenses	*
Legal Fees and Expenses	*
Accounting Fees and Expenses	*
Blue Sky, Qualification Fees and Expenses	*
Transfer Agent Fees and Expenses	*
Miscellaneous Expenses	*
Total	$ *

* To be completed by amendment.

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 or officers or persons who act or acted at our request as a director or officer of a body corporate of which we are or were a direct or indirect shareholder or creditor except in respect of an action by or on behalf of us or such body corporate to procure a judgment in its favor in certain situations. 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 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 1933, as amended.

Item 15. Recent Sales of Unregistered Securities

The following list sets forth information regarding all unregistered securities sold by us since August 1, 2010, 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 August 1, 2010 through August 16, 2013, we issued an aggregate of 63,915 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$0.50 to CAD$1.25 per common share, for aggregate consideration of CAD$48,096.

(b) From August 1, 2010 through August 16, 2013, we issued an aggregate of 89,846 common shares pursuant to subscription rights issued under a research funding agreement and its predecessor agreement with Genome B.C.

(c) From August 1, 2010 through August 16, 2013 we granted to certain of our directors and officers, stock options under the Amended and Restated Stock Option Plan to purchase an aggregate of 3,816,088 common shares at exercise prices ranging from CAD$0.55 to CAD$1.91 per common share.

(d) From August 1, 2010 through August 16, 2013 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 313,400 common shares at exercise prices ranging from CAD$0.55 to CAD$0.77 per common share.

(e) From August 1, 2010 through August 16, 2013, we issued to Genome B.C. 69,356 subscription rights, under a research funding agreement and its predecessor agreement, of which 69,356 subscription rights are outstanding. These outstanding subscription rights are automatically convertible into an aggregate of 69,356 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 Amendment of the Company, to be effective upon completion of the offering.
3.2*	Form of 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.
5.1*	Opinion of McCarthy Tétrault LLP.
10.1†*	Collaboration and License Agreement, dated November 10, 2010, by and between the Company and Isis Pharmaceuticals, Inc.
10.2†*	Exclusive Collaboration Research and Option Agreement, dated June 10, 2009, by and between the Company and Merck Sharp & Dohme Research Ltd, as amended.
10.3†*	Sublicense and Research Agreement, dated June 18, 2001, by and between the Company and Amsterdam Molecular Therapeutics B.V., as amended.
10.4†*	Collaborative Research and License Agreement, dated December 22, 2011, by and among the Company, Genentech, Inc. and F. Hoffmann-La Roche Ltd, as amended.
10.5†*	Collaborative Development and License Agreement, dated December 7, 2012, by and between the Company and Ivax International Gmbh.
10.6†*	License Agreement, dated, May 19, 2000, by and between the Company and the University of British Columbia, as amended.
10.7#	Stock Option Plan, as amended, and form of option agreement thereunder.
10.8#*	2013 Equity Incentive Plan, and form of option agreement thereunder.
10.9*#	Offer Letter, dated December 7, 2004, by and between the Company and Simon Pimstone.
10.10*#	Offer Letter, dated October 13, 2000, by and between the Company and Paul Goldberg.
10.11*#	Offer Letter, dated April 14, 2010, by and between the Company and Tarek Mansour.
10.12	Lease, dated as of 2001, by and between the Company and Discovery Parks Incorporated, as amended through July 18, 2013.
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).

* To be filed by amendment.
† Confidential treatment will be requested with respect to certain portions of this exhibit. Omitted portions will be 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 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 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 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, 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, 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 this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in Burnaby, British Columbia, Canada, on , 2013.

XENON PHARMACEUTICALS INC.

By: _____
Simon Pimstone
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Simon Pimstone and Karen Corraini as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities (including his or her capacity as a director and/or officer of Xenon Pharmaceuticals Inc.) to sign any or all amendments (including post-effective amendments) to this registration statement and any and all additional registration statements pursuant to Rule 462(b) of the Securities Act of 1933, and to file the same, with all exhibits thereto, and all other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as they, he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agents or any of them, or their, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE	TITLE	DATE
Simon Pimstone	President, Chief Executive Officer and Director (Principal Executive and Financial Officer)	, 2013
Sonia Graham	Controller (Acting Principal Accounting Officer)	, 2013
Michael Tarnow	Chair of the Board of Directors	, 2013
Mohammad Azab	Director	, 2013
Johnston Evans	Director	, 2013
Michael Hayden	Director	, 2013

SIGNATURE	TITLE	DATE
Frank Holler	Director	, 2013
Gary Patou	Director	, 2013
Evan Stein	Director	, 2013

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24.1	Powers of Attorney (included in page II-5 to the original filing of this registration statement).

* To be filed by amendment.
† Confidential treatment will be requested with respect to certain portions of this exhibit. Omitted portions will be filed separately with the Securities and Exchange Commission.
# Indicates management contract or compensatory plan.

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 "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.

2.4 "Exchange Act" means the United States Securities Exchange Act of 1934, as amended.

2.5 "Exchanges" means any stock exchange on which the Shares are listed at the time.

2.6 "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.

2.7 "Grant Date" means the date specified in an Option Agreement as the date on which an Option is granted.

2.8 "Xenon" means Xenon Pharmaceuticals Inc. and its successors.

2.9 "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).

2.10 “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.

2.11 “Option” means an option to purchase Shares granted pursuant to this Plan.

2.12 “Option Agreement” means an agreement, in the form attached hereto as Schedule A, whereby Xenon grants to an Optionee an Option.

2.13 “Optionee” means each of the directors, officers and Service Providers granted an Option pursuant to this Plan and their heirs, executors and administrators.

2.14 “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.

2.15 “Option Shares” means the aggregate number of Shares which an Optionee may purchase under an Option.

2.16 “Plan” means this Xenon Pharmaceuticals Stock Option Plan.

2.17 “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.

2.18 “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).

2.19 “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 7,373,338. 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

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 of the Option Price 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. Delivery of the Optionee’s cheque payable to Xenon in the amount of the Option Price shall constitute payment of the Option Price unless the cheque is not honoured upon presentation in which case the Option shall not have been validly exercised.

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), (d) and (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) *Shortened 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 be reduced to thirty (30) days; 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 any such extension shall not exceed the original Expiry Date of such Option.

4.4 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.

In addition, any Options or Successor Options held by a director, officer or Service Provider shall immediately become fully vested and exercisable 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

[*attached*]

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 , 20 (the "**Grant Date**");
2. (the "**Optionee**");
3. is granted the option to purchase Common Shares (the "**Option Shares**") of Xenon;
4. at the price (the "**Option Price**") of $ per share;
5. [vesting over a 3 year term with:
   - the first one-third of the Option Shares vesting on the 1st anniversary of the Grant Date above;
   - the remaining Option Shares then vesting over the course of the next two (2) years, in equal amounts, on the last day of each month;]

[OR]

[vesting over a 4 year term with:

- the first 25% of the Option Shares vesting on the 1st anniversary of the Grant Date above;
- the remaining Option Shares then vesting over the course of the next three (3) years, in equal amounts, on the last day of each month;]

6. all fully-vested options are exercisable, in whole or in part, up to the day of , 20 (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

_____

[*insert name of optionee*]

LEASE
BUILDING 10 – DISCOVERY PLACE
3650 GILMORE WAY, BURNABY, B.C.

BETWEEN

DISCOVERY PARKS INCORPORATED

AND

XENON GENETICS INC.

FRASER MILNER CASGRAIN

15th Floor, The Grosvenor Building, 1040 West Georgia Street, Vancouver, B.C., Canada V6E 4H8
Telephone (604) 687-4460 Fax (604) 683-5214 www.fmc-law.com

Montreal Ottawa Toronto Edmonton Calgary Vancouver

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LEASE
BUILDING 10 — DISCOVERY PLACE
3650 GILMORE WAY, BURNABY, B.C.

THIS INDENTURE made effective as of the 1st day of , 2001.

BETWEEN:

DISCOVERY PARKS INCORPORATED, duly incorporated under the laws of the Province of British Columbia under Incorporation No. 173252 and having an office at #602 – 1401 West Broadway, in the City of Vancouver, in the Province of British Columbia, V6H 1H6

(the "Landlord")

AND:

XENON GENETICS INC. duly incorporated under the laws of Canada under Incorporation No. A-52356 and having an office at 100 – 2386 East Mall, in the City of Vancouver, in the Province of British Columbia, V6T 1Z3

(the "Tenant")

WHEREAS:

A. The Landlord is the owner of the Land and Building described herein; and

B. The Landlord has agreed to lease the Building to the Tenant on the terms herein contained.

WITNESSES that in consideration of the rents, covenants and agreements hereinafter reserved and contained on the part of the Tenant to be paid, observed and performed the Landlord hereby demises and leases the Premises to the Tenant as hereinafter described all on the terms, conditions and covenants as hereinafter set forth.

1.0 PREMISES

1.1 The Premises means that portion of the Land located at 3650 Gilmore Way, Burnaby, British Columbia comprising a Rentable Area of approximately 56,776 square feet being the entire Building situated thereon, as set out in Schedule "A" attached hereto.

2.0 TERM

2.1 To have and to hold the Premises for and during the term of ten (10) years commencing on the Commencement Date and expiring on the day immediately prior to the tenth anniversary of the Commencement Date.

3.0 RENT

3.1 Yielding and paying therefor unto the Landlord at its office at #602 – 1401 West Broadway, Vancouver, B.C., V6H 1H8, or at such other place as the Landlord may direct in writing, Basic Rent for Premises in the sum set out hereunder together with applicable goods and services tax, payable in advance on the first day of each and every month of the Term as follows:

Period	approximate annual Basic Rent	approximate monthly Basic Rent
Years 1 – 5	$1,021,968 + GST (18.00 per square foot)	$85,164 + GST
Years 6 – 10	$1,107,132 + GST ($19.50 per square foot)	$92,261 + GST

3.2 The Landlord acknowledges receipt from the Tenant of a deposit of $170,685.33, including GST, which shall be paid to the Landlord on execution of this Lease and applied on account of the payment of Rent, Operating Expenses and Taxes for the first and second months of the Term during which the Tenant commences payment of Rent and after expiry of all rent free periods set out in this Lease. The deposit is to be placed in an interest bearing trust account with all interest accruing to the Tenant. Following execution of this Lease the deposit shall be held for the benefit of the Landlord, but interest thereon shall continue to be for the benefit of the Tenant. Interest shall be released to the Tenant on the first day of the second month of the Term in which the Tenant is obligated to pay Rent.

3.3 Upon determination of the actual Rentable Area by a surveyor appointed by the Landlord, the Rent shall be adjusted accordingly on the basis of the Rentable Area of the Premises multiplied by $18.00 per square foot per year for each of the first five years of the Term and $19.50 per square foot per year for each of the next five years of the Term.

3.4 This Lease shall be an absolutely net lease and the Annual Net Rent shall be net to the Landlord and shall be paid without set-off, abatement, deduction or counterclaim except as may be specifically provided for in this Lease or the Offer to Lease.

3.5 Notwithstanding the foregoing, the Tenant shall not be required to pay Basic Rent for the first four months of the Term but shall be required to pay Additional Rent during the first four months of the Term.

3.6 Notwithstanding the foregoing, the Tenant shall not be required to pay Rent during the Fixturing Period and any period of occupancy permitted under Section 10.3. In the event the Fixturing Period is extended as set out in Section 10.2 hereof, the abatement of Rent will also be extended during such extension to the Fixturing Period. In the event of force majeure as set out Section 22.1, the abatement of Rent set out herein shall commence upon the expiration of the period of force majeure.

3.7 The Landlord shall be obligated to pay to the Tenant the Leasehold Improvement Allowance in accordance with Section 31.0.

4.0 USE OF DEMISED PREMISES

4.1 The Tenant will use the Premises for Research and Development, general business, laboratory uses and for related business activities all in accordance with the zoning bylaws of the City of Burnaby, including without limitation the requirements of Discovery Place OCP dated February 14, 1996 and for no other purpose and, subject to the provisions of Sections 6.11 and 6.13 of this Lease, will not permit any part of the Premises to be used or occupied by any persons other than the Tenant, its employees and invitees.

5.0 DEFINITIONS

5.1 In this Lease, unless otherwise stated, the following terms will have the following meanings:

(a) “Additional Rent” means the amounts payable by the Tenant to the Landlord as described in Section 16.1 hereof and includes, without limitation, Operating Expenses and Taxes;

(b) “Audit” means a review by the Tenant’s Consultant of the Tenant’s practices with respect to Hazardous Substances for the prior year to ensure that all applicable Tenant Protocols have been followed, and which will itemize any incidents where a Tenant Protocol has not been followed and set out remedial measures to be taken by the Tenant in the upcoming year to avoid further breaches of the Tenant Protocol;

(c) “Authority” means any government agency, body, corporation, organization, department or authority responsible for administering or enforcing any Law;

(d) "Basic Rent" means the rent described in Section 3.1 hereof;

(e) "BOMA Standard" means the publication entitled 'Standard Method for Measuring Floor Area in the Office Buildings' as approved June 7, 1996, by American National Standards Institute, Inc., as identified by the publication reference ANSI/BOMA Z65.1-1996 and where the context requires, means the terminology and methodology described therein;

(f) "Building" means the building located at 3650 Gilmore Way, Burnaby, B.C., and in which the Premises are situated;

(g) "Building Rentable Area" means the total of all Rentable Areas in the Building;

(h) "Business Days" means the Monday to Saturday inclusive in each week, save and except any such day that be declared, by lawful authority, a holiday;

(i) "Commencement Date" means the day next following the last day of the Fixturing Period. If the Fixturing Period has not commenced by March 1, 2001, the Commencement Date shall be extended by one day for each day past March 1, 2001, the commencement of Fixturing Period is delayed.

(j) "Common Areas" means all of those portions of the Land not including the Building, improvements, facilities, amenities, utilities, installations, and equipment or portions thereof on the Land forming part of or being for the use of the Building;

(k) "Environment" has the meaning given to it in the Canadian Environment Protection Act (Canada) from time to time;

(l) "Existing Pollution" means Pollution of the Land or Building which has not been caused by the Tenant;

(m) "Fixturing Period" means the period described in Section 10.1 hereof;

(n) "Hazardous Substance" means any hazardous material or matter, whether in liquid, solid, or gas or other form, that is prohibited, regulated, controlled or licensed by any Laws;

(o) "Land" means that certain parcel or tract of land situate in Burnaby and more particularly known as a portion of PID: 019-179-758, Lot 2, District Lot 71, Group 1, NWD, Plan LMP21978;

(p) "Landlord's Architect" means Bunting Coady Architects or such other architect as is designated in writing by the Landlord;

(q) "Landlord's Consultant" means any qualified environmental consultant designated in writing by the Landlord;

(r) "Law" means any Federal, Provincial, Municipal, and other governmental laws and regulations relating to protection of the Environment or its Pollution including, without limitation, the Canadian Environmental Protection Act (Canada) and the Waste Management Act (British Columbia) and the regulations made under them and includes any amendment, revision, re-enactment or replacement of any such Law, regulation, or by-law;

(s) "Leasehold Improvement Allowance" means the amount set forth in Section 31.1 to be paid by the Landlord to the Tenant an account of the Tenant leasehold improvement expenditure;

(t) "Medium" means any land, water or air and includes the Land, Building and Premises;

(u) "Normal Business Hours" means the hours on Business Days from 7:30 a.m. to 6:00 p.m. from Monday to Friday inclusive and 8:00 a.m. until 1:00 p.m. on Saturday;

(v) "Offer to Lease" means the offer to lease made by the Tenant on December 11, 2000, and accepted by the Landlord on December 12, 2000;

(w) "Operating Expenses" means, without duplication or profit except any profit in respect of (viii) below, all expenses chargeable against income in connection with the operation, maintenance and repair of the Building, including all Common Areas and the Land and, without restricting the generality of the foregoing, includes;

(i) fuel and operating expenses incurred in cleaning, heating, and ventilating the Building and providing water, natural gas, electrical service, telephone service, and sanitary and storm sewer services;

(ii) operating expenses incurred in cleaning and maintaining, including rubbish and snow removal, the sidewalks, roads, street lights, paving, surface parking lots, underground parking facilities, and landscaping on the Land;

(iii) water rates, special taxes and licenses (other than the Taxes or Tenant's Taxes or taxes on capital, income or profits), Building insurance, and utility expenses for the Common Areas;

(iv) salaries and wages (including employees' benefits, worker's compensation and other items of a similar nature) directly attributable to the Land and the cost of service contracts incurred in the cleaning, maintenance, repair and operation of the Building and the Land and payments made for security services provided to the Land;

(v) the cost of building and cleaning supplies used for the Building;

(vi) the cost of painting interior areas of the Building, not normally rented to tenants and costs of painting and otherwise maintaining the parking areas including both the underground and surface lots and the outside of the Building;

(vii) the cost of depreciation of HVAC machinery and equipment leased and the costs thereof being fully amortized over their useful life taking into account any reduction in their useful life occasioned by increased use of such HVAC machinery and equipment requested by the Tenant under Section 7.4 all as determined by the Landlord acting reasonably on the advice of a qualified consultant acceptable to the Tenant, acting reasonably, together with interest thereon calculated daily and compounded monthly at 2.0% per annum above the rate declared by HSBC Bank Canada as its "prime rate";

(viii) an allowance for management and overhead expenses of the Landlord not exceeding 3.75% of the gross income of the Building;

(ix) Landlord's costs of obtaining and maintaining insurance for liability, fire and other casualties in respect of the Building; and

(x) the costs incurred by the Landlord in making capital improvements to the Building which result in reduction of these Operating Expenses where such reduction during the remainder of the Term is greater than the current depreciated portion of such costs; and

Provided always that Operating Expenses shall not include leasing commissions, corporation capital tax or other capital taxes, depreciation (except as specifically provided herein), cost of structural repairs to the Building, interest on debt, or capital retirement of debt, the cost of repair or replacement of structural defects in the original construction of the Building and any other defect in the original construction of the Building where the cost of repair or replacement of such defect is covered by warranty by the contractor or supplier as the case may be or any amounts directly chargeable by the Landlord to any tenant or tenants as otherwise provided in this Lease;

(x) "Person" includes a person, firm, corporation, partnership, group of persons, or any combination of them and the personnel or other legal representatives of such person to whom the context can apply at law;

(y) "Pollute" is a verb which means to Release into or unto any Medium any Hazardous Substance that:

(i) alters the physical, biological, or chemical nature of that Medium;

(ii) alters the capacity of the Medium to support any living thing whether animal or plant life;

(iii) injures or is capable of injuring the health or safety of a person in or near the Medium;

(iv) injures or is capable or injuring property or any life form in or near the Medium;

(v) interferes with or is capable of interfering with visibility or the dispersion of light or any photochemical activity within the Medium;

(vi) interferes with or is capable of interfering with normal conduct of business in, on near or from the Medium;

(vii) causes or is capable of causing physical discomfort to a person in, on or near the Medium;

(viii) damages or is capable of damaging the Environment; or

(ix) is Special Waste,

and such Release is prohibited under any Law, or regulated, controlled or licensed under any Law if such Release exceeds the acceptable standard prescribed by such Law and "Polluted" is an adjective and "Pollution" and "Pollutant" are nouns which have meanings that correspond to the meaning contained in this clause.

(z) "Premises" means that portion of the Building described in Section 1M and shown outlined on Schedule "A";

(aa) "Proportionate Share" means the ratio which the Rentable Area of the Premises bears to the Building Rentable Area of the Building;

(bb) "Pro Rata Portion" as applied to any amount means the Proportionate Share for the time for which the calculation is made as a fraction of whole of the period contemplated in the Lease;

(cc) "Release" includes release, spill, leak, pump, pour, dump, abandon, emit, empty, discharge, spray, inoculate, deposit, seep, throw, place, exhaust, inject, escape, leach, dispose, infuse or introduce other than in accordance with the applicable Tenant Protocol;

(dd) "Remedial Action" means any act, measure, work or thing done, taken, carried out, acquired or constructed that is or may be reasonably necessary to investigate, assess, control, abate, dissipate, render harmless, mitigate or remove Pollution in accordance with the requirements of any Authority having jurisdiction over a Pollutant;

(ee) "Rent" means the Basic Rent and Additional Rent;

(ff) "Rentable Area" has the meaning ascribed to it in the BOMA Standard;

(gg) "Research and Development" means the carrying on or application of scientific or technological research and development as described in the zoning by-laws of the City of Burnaby and the zoning requirements of Discovery Place OCP dated February 14, 1996,

applicable to the Land in cooperation with governments or business and industry or foundations or technological institutions or universities or other educational institutions in the application of science and technology for the development of industry in British Columbia and shall, subject to the other terms of this Lease, include the right of the Tenant to develop and construct prototypes of goods or products, for the purpose of further research, development and testing as part of the carrying on of the Research and Development. In the process of developing the scientific or technological research and development, certain goods and products may be offered for sale;

(hh) "Taxes" mean all taxes, rates and assessments, whether general or special, levied or assessed by the municipal authority for such purposes payable by the Landlord in respect of the Building and the Land and include any other taxes, rates and assessments payable by the Landlord which are imposed in substitution of the foregoing taxes, rates and assessments as finally determined for each calendar year as a result of assessment, appeal or judicial review and include any reasonable legal fees or appraiser's fees incurred by the Landlord in respect of such final determination, but excluding development cost charges or other amounts levied by the municipalities authorities in relation to the original development of the Land or construction of the Building;

(ii) "Tenant's Consultant" means any qualified environmental consultant designated in writing by the Tenant acceptable to the Landlord, acting reasonably;

(jj) "Tenant's Environmental Management Plan" means a written plan prepared by the Tenant's Consultant addressing how the Tenant shall manage any environmental risks including any Hazardous Substances involved in its business in the Premises during the Term;

(kk) "Tenant's Protocol" means, with respect to a Hazardous Substance, a written procedure prepared by the Tenant's Consultant in accordance with the Tenant's Environmental Management Plan detailing how the Hazardous Substance will be transported, received, handled, stored, used and disposed of, including procedures to be followed if there is a Release of Hazardous Substance other than in accordance with the Tenant Protocol;

(ll) "Tenant's Taxes" means all taxes, licenses, rates, duties and assessment imposed or levied by lawful authority covering any period during the Term and relating to or in respect of the business or profession of the Tenant or relating to or in respect of improvements, fixtures,

machinery or chattels or equipment brought onto the Premises by the Tenant or being the property of the Tenant or relating to or in respect of improvements to the Premises built, made or installed by the Tenant or at the Tenant's request, or being any special or additional taxes, licenses, rates, duties and assessments which the Tenant or any sub-Tenant or licensee of the Tenant shall elect or cause to have the Premises or any part thereof assessed or charged with, whether any such taxes, licenses, rates, duties and assessments are payable in law by the Tenant or by the Landlord and whether such taxes, licenses, rates, duties and assessments are included by the taxing authority in the taxes, licenses, rates, duties and assessments or levied on or with respect to the Building;

(mm) "Tenant's Work" mean's the Tenant's leasehold improvements as defined under Schedule "B" of the Offer to Lease; and

(nn) "Term" means the term of this Lease described in Section 2.0.

6.0 COVENANTS OF TENANT

The Tenant covenants with the Landlord:

6.1 To pay Rent as and when due;

6.2 To pay the cost of electricity, gas and other utilities used within the Premises, such costs to be paid by the Tenant as and when due.

6.3 Subject to Section 12.0, to repair the Premises, reasonable wear and tear, structural repairs, and damage by fire, lightning and other casualties against which the Landlord is insured, or for which the Landlord is required to be insured under this Lease, only excepted.

6.4 Subject to Section 7.7, that, upon providing not less than 48 hours' written notice specifying a specific time for entry, the Landlord may enter and view the state of repair and that the Tenant will repair according to notice save as aforesaid.

6.5 That the Tenant will leave the Premises in good repair, save as aforesaid.

6.6 If the Tenant fails to repair in accordance with the provisions hereof, the Landlord may on 10 days prior written notice except in the case of an emergency enter the Premises and make the required repairs and,

for that purpose, the Landlord may bring and leave on the Premises all necessary tools, material and equipment and the Landlord will not be liable to the Tenant for any inconvenience, loss, injury or damages suffered by the Tenant thereby, unless caused by the negligence or willful misconduct of the Landlord or those for whom the Landlord is responsible at law, and the expense of such repair will be borne by the Tenant which will pay it to the Landlord forthwith on demand.

6.7 To restore forthwith at its expense broken or damaged plate glass on the Premises from time to time.

6.8 Not to do, suffer or permit any act or neglect which may in any manner directly or indirectly cause injury to the Premises or to the Building of which the Premises form a part or to any fixtures or appurtenances thereof, or which may be or become a nuisance or interference with the comfort of any of the occupants of the Building or which may in the reasonable opinion of the Landlord render the Building or any part thereof less desirable or injure the reputation thereof as a first-class office building.

6.9 Not to exhibit signs of any nature on exterior walls, doors or windows of the Premises without the prior written approval of the Landlord, such approval not to be unreasonably withheld or delayed. Notwithstanding the foregoing, the Tenant will be allowed:

(a) to display a sign on the standard building directory signage to be provided by the Landlord in a manner to be consistent with a suburban business park;

(b) the option to install prominent signage on the exterior of the Building and pedestal signage adjacent to the entrance to the Building, including the Building name set out herein,

all of which shall subject to the approval of the City of Burnaby or any governing authorities. The Landlord agrees to name the Building “The Xenon Genetics Building”. The Landlord acknowledges and agrees that neither the Tenant’s signage on the Building, nor the use of the Tenant’s name in the name of the Building shall grant the Landlord any rights or interest in the Tenant’s name or any derivation thereof nor will the Landlord be permitted to continue to use the Tenant’s name in the name of the Building or otherwise after expiry or sooner termination of this Lease (or such earlier date as the Tenant so notifies the Landlord in writing). At the expiration or sooner termination of this Lease, the Tenant shall, upon request by the Landlord forthwith, remove any sign installed by the Tenant pursuant to sub-Section 6.9(b).

6.10 Not to do or permit anything to be done whereby any policy of insurance on the said Building or any part thereof placed by the Landlord or any other Tenant in the Building may become void or voidable or

whereby the premium thereon may be increased, and if the Tenant is in breach hereof and as a result of such breach any premium of any such policy is increased, the Tenant will forthwith pay to the Landlord the amount of the increase in such premium, provided that nothing herein will limit any other remedy of the Landlord or any other Tenant provided this Section will not apply to the Tenant's proposed use of the Premises by the Tenant.

6.11 The Tenant shall not assign or sublet the Premises in whole or in part without the prior consent in writing of the Landlord, such consent not to be unreasonably or arbitrarily withheld or delayed where the Tenant wishes to assign or sublet to a tenant, which covenants to use the Premises for only those uses permitted in Section 4.1, provided that the Tenant, at the time the Tenant requests the consent of the Landlord, delivers to the Landlord such information in writing (the "Required Information") as the Landlord may reasonably require respecting the proposed assignee or subtenant, provided always that no such assignment or subletting, whether consented to by or not by the Landlord, will:

(a) in any manner release the Tenant from any covenant to be observed or performed by it, and

(b) be made to any person, firm, partnership or corporation carrying on any business which the Landlord is obliged to restrict by reasons of any other lease or contract in respect of any occupancy of a portion of the Building.

6.12 A change in control of the Tenant shall be deemed to be an assignment for purposes of Section 6.11. This provision however, shall not apply to any transaction in which the Tenant becomes a public company or any transaction or change in control in the Tenant while the Tenant is a public company.

6.13 Notwithstanding Section 6.11, the Tenant shall be permitted to sublease a portion of the Premises to Electronic Arts (Canada) Inc. without consent of, but with notice to, the Landlord provided that Electronic Arts. (Canada) Inc. agree, inter alia, to be bound by the covenants of the Tenant under this Lease except the covenant to pay Rent and Additional Rent. Notwithstanding any sublease permitted under this Section 6.13 or any requirement in the sublease for Electronic Arts (Canada) Inc. to observe any obligations set out in this Lease, the Tenant shall not be released from any obligation contained in this Lease including, without limitation, from any covenant to be observed or performed by the Tenant under this Lease.

6.14 The Tenant is allowed to profit on any assignment or subletting permitted by Sections 6.11 or 6.13.

6.15 Notwithstanding any assignment or sublease of this Lease of all or a portion of the Premises, whether consented to or not by the Landlord, the Landlord shall not be obligated to pay any Leasehold Improvement Allowance (defined hereafter) to any assignee or sublessee but shall only be obligated to make any Leasehold Improvement Allowance to the Tenant as set out in this Lease.

6.16 To keep the Premises free of rubbish and debris at all times and to provide proper and sufficient receptacles for waste.

6.17 Environmental Considerations

6.17.1 The Tenant must not at any time cause or allow any Hazardous Substance to be generated, created, used, stored, treated, transferred, transported or disposed of on the Land or Building except in compliance with all Laws and the Tenant's Environmental Management Plan and shall not use the Premises in any manner which, in whole or in part, would cause the Land to be a contaminated site or similar designation under any Law.

6.17.2 Prior to the Commencement Date, the Tenant shall prepare and deliver to the Landlord the Tenant's Environmental Management Plan.

6.17.3 The Tenant shall provide the Landlord with a copy of any Tenant Protocol required by the Tenant's Environmental Management Plan.

6.17.4 If there is a Release of a Hazardous Substance on or about the Premises as a result of an act or omission of the Tenant, the Tenant will follow the remedial procedures set out in the applicable Tenant Protocol. If the Release has the potential to Pollute the Land or poses a risk to persons in or about the Land, the Tenant will forthwith notify the Landlord of the Release and the remedial action being taken by the Tenant.

6.17.5 Within 60 days of each anniversary of the Commencement Date during the Term and within 60 days of the expiry of the Term, the Tenant will cause an Audit to be performed and deliver a copy of that Audit to the Landlord. If the Audit includes remedial measures to be followed by the Tenant to ensure future compliance with the Tenant Protocols, the Tenant will be obliged to enact such remedial measures.

6.17.6 The Tenant shall be responsible at its sole expense for remediation of any Pollution of the Land or Building caused by a Release by the Tenant of a Hazardous Substance. The Tenant will indemnify and save harmless the Landlord from any cost, damage, loss or liability reasonably incurred, or suffered, by the Landlord as a result or in respect of any Pollution of the Land or Building caused by the Tenant. This indemnity will survive the expiry or earlier termination of this Lease.

6.17.7 The Landlord will indemnify and save harmless the Tenant from any cost, damage, loss or liability reasonably incurred, or suffered, by the Tenant as a result or in respect of any Existing Pollution. This indemnity will survive the expiry or earlier termination of this Lease.

6.17.8 If there is an intermingling of Pollution caused by the Tenant and Existing Pollution, the Landlord and the Tenant will share the costs of remediating such intermingled Pollution based on a reasonable allocation determined in accordance with the allocation principals in the Waste Management Act.

6.17.9 If the Landlord is required by any Authority to determine whether the Land and Building are Polluted or to take Remedial Action regarding Pollution of the Land or Building:

(a) the Landlord shall notify the Tenant and provide it with a copy of all materials received from the Authority with respect to the Pollution and Remedial Work;

(b) the Landlord and the Tenant, each acting reasonably, shall cooperate with each other to challenge any aspect of the order of the Authority which either party reasonably believes is incorrect or unjustified and to negotiate with the Authority Remedial Action that is acceptable to the Landlord and the Tenant, each acting reasonably;

(c) if the Pollution has been caused by the Tenant, the Tenant shall take any Remedial Action which the Authority ultimately requires be taken; and

(d) if the Pollution has not been caused by the Tenant, the Landlord shall take any Remedial Action which the Authority ultimately requires be taken.

6.17.10 If the Landlord is required by any Authority to take Remedial Action regarding Pollution of the Land or Building not caused by the Tenant, the Landlord or its respective employees and agents may enter the Premises and may:

(a) perform any audits, investigations and surveys the Landlord or any Authority considers necessary to determine better the nature and extent of the Pollution and the necessary Remedial Action, and

(b) take any Remedial Action any Authority requires be taken and the Tenant must permit the Landlord, its employees and agents including the Landlord's Consultant to have that access to the Premises which is reasonably necessary in the opinion of the Landlord to enable it to comply with the requirements of any Authority and to take Remedial Action,

provided that the Landlord will take all reasonable steps to minimize the effect of such work on the Tenant and its business. The Landlord shall not enter the Premises for any such purpose without providing at least 48 hours written notice and specifying a particular time when it proposes to enter the Premises so that the Tenant may arrange any appropriate escort. The provisions of section 7.7 of this Lease shall apply to any entry into the Premises permitted by this section 6.17.10.

6.17.11 The Tenant shall cooperate with the Landlord in the provision of such information at the times and in the form required by the Landlord, acting reasonably, to ensure the, proper monitoring and supervision of the Land and Building with respect to Pollution.

6.17.12 At the expiry or earlier termination of this Lease the Tenant shall remove at its sole cost and expense any Hazardous Substances which the Tenant has stored within the Premises.

6.18 To abide by and comply with all laws, rules and regulations of every municipal or other authority which in any manner relate to or affect the business of the Tenant or the use of the Premises by the Tenant.

6.19 To pay the Landlord all charges for maintenance and cleaning of electrical and lighting fixtures and fittings in the Premises and the same is included in "Operating Expenses" herein. The Landlord will have the exclusive right to attend to such maintenance and cleaning and may adopt a system of periodical renewals on a group basis in accordance with good practice in this respect.

6.20 To maintain at the Tenant's sole expense but for the common benefit of the Landlord and the Tenant:

(a) comprehensive general public liability insurance including bodily injury, death and property damage, on an occurrence basis with respect to the use of the Premises and the Tenant's use and occupancy thereof in an amount not less than $2,000,000.00; and

(b) fire and extended coverage insurance on the Tenant's improvements to the replacement cost thereof,

and such insurance to be in form and with insurers acceptable to the Landlord, acting reasonably, and the Tenant will deliver promptly to the Landlord a certificate confirming that the Tenant has such insurance if so required by the Landlord.

6.21 To immediately advise the Landlord and do all things necessary to remove any dangerous condition from time to time existing on the Premises and arising as result of the act of or omission of the Tenant, its agents or servants.

6.22 To indemnify and hold harmless the Landlord from and against all actions, causes of action, suits, claims, demands, damage expense, liens or rights of lien whatsoever arising out of the occupancy of the Premises hereunder save for negligence or willful misconduct of the Landlord and those for whom the Landlord is at law responsible.

6.23 To pay to the Landlord interest at 5% per annum above the rate of interest declared from time to time by the main branch of HSBC Bank Canada as its ‘prime rate’, compounded annually, on any amount not paid as and when due hereunder until paid.

6.24 If the Tenant wishes to register this Lease in the appropriate Land Title Office, the Tenant may do so at the Tenant’s sole cost.

7.0 COVENANTS OF LANDLORD

The Landlord covenants with the Tenant:

7.1 For quiet enjoyment.

7.2 To complete the Building, including the Landlord’s (Base Building) Work as set out in the Offer to Lease and Schedule “B” attached thereto, to the extent required to allow the Tenant to occupy the Premises by the commencement of the Fixturing Period for purposes of completing the Tenant’s Work.

7.3 To supply water and other utilities to the Premises for the normal and reasonable requirements of the Tenant and at the Tenant’s expense without, in any case, being liable for any loss, damage or inconvenience resulting from failure of the supply of utilities to the Building.

7.4 To provide, maintain and operate during Normal Business Hours, and outside of Normal Business Hours at the request of the Tenant at the sole additional cost of the Tenant, an efficient heating, ventilating

and air conditioning system where provided in the Building. The Tenant shall be solely responsible to maintain, operate, repair, and replace any heating, ventilation and air conditioning system not provided by the Landlord as part of the Landlord's (Base Building) Work which has been installed or constructed by the Tenant as part of the Tenant's Work.

7.5 The Landlord shall take out or cause to be taken out and keep or cause to be kept in full force and effect:

(a) "all risk" insurance on the Buildings and improvements in an amount such as would be carried out by a prudent owner, subject to such deductions and exceptions as the Landlord may determine, acting as a reasonably prudent landlord, against fire and such other hazards covered by policies normally in use from time to time for buildings and improvements of a similar nature similarly situated;

(b) comprehensive public liability insurance in respect of the Building of a kind and in an amount such as would be carried by a prudent owner, subject to such deductions and exceptions as the Landlord may determine, acting reasonably;

(c) loss or rental income insurance not exceeding Basic Rent, Additional Rent, Operating Expenses and Taxes for the Building of which the Premises form a part for a period not exceeding eighteen (18) months;

provided that nothing herein shall prevent the Landlord from insuring with broader coverage, acting as a reasonably prudent landlord.

7.6 Each policy of insurance carried by the Landlord hereunder shall contain a waiver of the insurer's right of subrogation against the Tenant and each policy of insurance carried by the Tenant pursuant to this Lease shall contain a waiver of the insurer's right of subrogation against the Landlord.

7.7 Except in the case of an emergency when no representative of the Tenant is available, in accordance with Section 6.17, or following default by the Tenant, not to enter the Premises without an escort designated by the Tenant unless the Tenant specifically confirms otherwise or a representative of the Tenant fails to attend with the Landlord at the specific time identified by the Landlord in any notice required to be provided to the Tenant by the Landlord prior to entry into the Premises as may be set out in this Lease. The Tenant shall not be liable to the Landlord or any other party acting on behalf of the Landlord for any loss, damage,

cost or injury arising in connection with any unescorted entry by the Landlord or any other party acting on behalf of the Landlord into the Premises and the Landlord hereby releases the Tenant for any liability arising therefrom.

7.8 To operate, manage and maintain the Building as a first class suburban office park building.

7.9 To repair and maintain, at its sole expense, the structural elements of the Building.

8.0 ALTERATIONS AND IMPROVEMENTS

8.1 Save for the installation of trade fixtures and furnishings, the Tenant will make no alterations, installations, removals, additions or improvements in or about the Premises without the Landlord's prior written consent, which consent will not be unreasonably withheld or delayed, and in the event of such consent, all work is done at the Tenant's sole expense and at such times and such manner as the Landlord may reasonably approve.

8.2 The Tenant will not suffer or permit any builders' liens to be filed against the interest of the Landlord in the Land or the Premises by reason of work, labour, services or material supplied or claimed to have been supplied to the Tenant or for which the Tenant may be in any way obligated, and if any such builders' lien will at any time be filed against the Land or the Premises whatsoever, the Tenant will cause the same to be discharged from title to the Land within 20 days of the date the Tenant has knowledge of such filing. The Landlord may wish to post security under the provisions of the *Builders Lien Act* or any legislation replacing such Act.

8.3 All articles of personal property and all business and trade fixtures, machinery and equipment, cabinet work, furniture and movable or immovable partitions owned or installed by the Tenant at the expense of the Tenant in the Premises will remain the property of the Tenant and may be removed by the Tenant at any time during the Term, provided that the Tenant at its expense will repair any damage to the premises or the Building caused by such removal of the original installation.

8.4 The Landlord may elect to require the Tenant to remove all or any part of the business and trade fixtures, machinery and equipment, cabinet work, furniture and movable and immovable partitions owned or installed by or on behalf of the Tenant after the commencement of the Term (other than those which constitute ordinary and reasonable commercial fixtures and improvements which would be reasonably useable by other commercial tenants) at the expiration of this Lease in which event such removal is done at the Tenant's expense and the Tenant will, at its expense, repair any damage to the Premises or to the Building caused by such removal.

8.5 If the Tenant does not remove the property set out in Section 8.4 forthwith after written demand by the Landlord, such property will, if the Landlord elects, be deemed to become the Landlord's property and the Landlord may remove the same at the same at the expense of the Tenant and the cost of such removal will be paid by the Tenant forthwith to the Landlord on written demand and the Landlord will not be responsible for any loss or damage to such property because of such removal.

9.0 IMPROVEMENT OF PREMISES

9.1 The Landlord shall construct the Building diligently and in a good and workmanlike manner in such a manner that it shall be considered as a first class suburban office building. The Landlord shall complete the Landlord's (Base Building) Work described as Landlord's Work in Schedule "B" the Offer to Lease prior to the commencement of the Fixturing Period.

9.2 Any Tenant's Work or improvements undertaken by the Tenant shall be completed in accordance with the terms of the Offer to Lease and Schedule "B" thereto.

9.3 Without limiting the generality of the foregoing, all Tenant's Work shall be approved by the Landlord in advance and the Landlord shall act reasonably and without delay in its review of the Tenant's working drawings.

10.0 FIXTURING PERIOD

10.1 The Fixturing Period means the period of ninety (90) days from the date the Landlord's (Base Building) Work is substantially completed and the Premises are turned over to the Tenant for purposes of the Tenant's Work. The Landlord shall provide the Tenant with no later than thirty (30) days notice that the Landlord's (Base Building) Work will be completed and ready for commencement of the Fixturing Period. The Landlord may provide notice to the Tenant of the commencement of the Fixturing Period at any time following execution of the Offer to Lease whether or not this Lease has been executed by the parties hereto. If the Fixturing Period has not commenced by March 1, 2001, the Tenant may, at it sole option, terminate this Lease and the deposit, plus all accrued interest, shall be returned to the Tenant.

10.2 The Tenant shall have exclusive possession of the Premises for at least the last 45 days of the Fixturing Period. In the event the Tenant is unable to obtain exclusive possession for at least the last 45 days

of the Fixturing Period, then the Fixturing Period will be extended to such date in order to allow the Tenant exclusive possession of the Premises for 45 consecutive days. In any event, the Tenant's possession of the Premises during the balance of the Fixturing Period may be in common with the Landlord, provided the Landlord shall use all reasonable best efforts to ensure its contractors do not interfere with the construction and installation of the Tenant's Work.

10.3 Prior to the commencement of the Fixturing Period, but following substantial completion of the Landlord's (Base Building) Work, the Landlord shall allow the Tenant to occupy the Premises on the first day following the day on which the Landlord can provide lawful occupancy to the Tenant for the purposes of allowing the Tenant to perform the Tenant's Work. Any period which the Tenant is allowed to occupy the Premises under this Section 10.3 shall be Basic Rent and Additional Rent free and shall not reduce the Fixturing Period.

11.0 SUBORDINATION

11.1 This Lease will, at the request of the Landlord, be made subject and subordinate to all mortgages which now or hereafter during the Term is recorded in the appropriate Land Title Office as a mortgage against the Land and Premises. The Tenant will execute promptly from time to time any assurance the Landlord may properly require to confirm this subordination with respect to any mortgage now or hereafter recorded provided that the Mortgagee provides to the Tenant a written non-disturbance agreement from any mortgagee in a form acceptable to the Tenant, acting reasonably.

11.2 Whenever required by any Mortgagee or a Trustee on behalf of a Mortgagee of any mortgage as contemplated in Section 10.1, the Tenant will attorn to and become a Tenant or Licensee of such Mortgagee or Trustee or any purchaser from the Mortgagee or Trustee in the event of an exercise by the Mortgagee or Trustee of its power of sale in the mortgage set out for the then unexpired residue of the Term upon all of the terms and conditions hereof, provided that such Mortgagee or Trustee has provided a non-disturbance agreement as contemplated in Section 11.1, subject to the terms of the non-disturbance agreement.

11.3 Whenever required by the Landlord, any Mortgagee or a Trustee on behalf of a Mortgagee, the Tenant shall promptly execute an estoppel certificate confirming this Lease and the significant business terms.

12.0 PROPERTY ETC. DAMAGE

12.1 The Landlord will not be liable for any injury or damage to persons or property resulting from fire, explosions, failing plaster, steam gas, electricity, water, rain, snow or leaks from any part of the Building or from pipes, appliances or plumbing works or from the roof, street or subsurface or from any other place unless caused by the negligence of the Landlord, its servants or agents, or those for whom the Landlord is responsible at law.

12.2 The Tenant will reimburse and indemnify and save harmless the Landlord for and from all expense, damages, loss or fines incurred or suffered by the Landlord by reason of any breach, violation or nonperformance by the Tenant of any covenant or provision of this Lease or by reason of damage which is caused by the Tenant, its servants or agents.

12.3 The Tenant will give the Landlord immediate notice in case of fire or accident in the Premises or in the Building of which the Tenant is aware.

13.0 DAMAGE TO OR DESTRUCTION OF PREMISES

13.1 If the Premises are damaged by fire or other casualty or if the Building is so damaged thereby restricting the use of the Premises then the Rent will abate in whole or in part according to the portion of the Premises which is non-usable by the Tenant until such damage is repaired and the Tenant is able to operate its business therefrom.

13.2 Except as provided in Section 12.3 if the Premises is damaged by fire or other casualty, the damages to the Premises will be repaired by the Landlord at its expense except that repairs to alterations or improvements made by the Tenant at its expense will be performed by the Landlord at the expense of the Tenant and the Tenant will at its own expense make all repairs and replacements of property which the Tenant is entitled to remove pursuant to Section 8.3. All repairs which the Landlord is required to make hereunder will be made with due diligence provided that the Landlord will not be liable to the Tenant for any loss or damage suffered by the Tenant as a result of any reasonable delay which may arise by reason of adjustment of insurance on the part of the Landlord on account of labour troubles or any other cause beyond the Landlord’s control.

13.3 If the Premises are rendered untenantable by fire or other casualty and if the Landlord decides not to restore the same or if the Building is so damaged that the Landlord will decide not to restore it or it is determined by the Landlord, acting reasonably, that the Building or the Premises cannot be restored within 6 months of such damage, then in any of such events, the Landlord will, within 45 days after such fire or other

casualty, give to the Tenant a notice in writing of such decision and within 30 days thereafter either the Landlord or Tenant may elect to terminate this Lease by notice in writing, the Term will expire forthwith, and the Tenant will vacate the Premises and surrender the same to the Landlord. If the Landlord does not give notice as aforesaid and the Premises or the Building, as the case may be, are not restored within six months from the time of the fire or other casualty causing the damage (subject to such time period being extended by the length of any reasonable delay which may arise by reason of adjustment of insurance on the part of the Landlord on account of labour troubles or any other cause beyond the Landlord's control) the Tenant may at its option, to be exercised within 10 days of the termination of said period of six months (or the termination of such later period as extended hereby) by notice in writing, terminate this Lease forthwith. Upon the termination of this Lease under the conditions provided in this clause the Tenant's liability for Rent will cease as of the day following the fire or casualty.

14.0 ACCESS TO DEMISED PREMISES

14.1 The Tenant will permit the Landlord to erect, build, use and maintain unexposed pipes, ducts and conduits in and through the Premises, Subject to Section 7.7, the Landlord its servants and agents will have the right to enter the Premises at reasonable times upon 48 hours written notice to examine the same and make such repairs, alterations, improvements or additions as the Landlord may deem necessary or desirable in the Premises or as the Landlord may be required to make by law or in order to repair and maintain the Building, and the Landlord will be allowed to take all material into the Premises that may be required therefor without the same constituting eviction of the Tenant in whole or in part and the Rent reserved will in no way abate while said repairs, alterations, improvements, or additions are being made by reason of interruption of the business of the Tenant. The Landlord will exercise reasonable diligence as to minimize the disturbance or interruptions of the Tenant's operations.

14.2 During the six months prior to the expiration of the Term or any renewal term, the Landlord may exhibit the Premises during Normal Business Hours to prospective tenants upon reasonable notice to the Tenant and for such purposes the Landlord, subject to Section 7.7 will have the right of entry to the Premises at any reasonable time and the Tenant at its option may have any servant or agent present at the time of such entry. The Landlord will have the right during the last six months of the Term to place upon the Premises a notice of reasonable dimensions and reasonably placed so as not to interfere with the business of the Tenant, stating that the Premises are for rent and further provided that the Tenant will not remove such notice or permit the same to be removed.

15.0 OPERATING EXPENSES AND TAXES

15.1 The Tenant will promptly pay the Tenant's Taxes as they become due and shall pay goods and services taxes applicable to Rent and Additional Rent when due.

15.2 If the Landlord is required by lawful authority or considers it desirable to pay the Tenant's Taxes which the Tenant fails or neglects to pay, the Tenant will pay the amount thereof to the Landlord forthwith after written request thereof.

15.3 The Tenant will pay to the Landlord its Proportionate Share of Operating Expenses and Taxes payable in 12 equal installments with the monthly payments of Rent as and when required hereunder. The Landlord will, within 90 days of its year-end, provide the Tenant with annual statements as to Operating Expenses and Taxes paid by the Tenant during the year. The Landlord will, at the Tenant's request by written notice given within 180 days after receipt of such statements, permit the Tenant to review invoices relating to those Operating Expenses contained in the annual statements at a time or times convenient to the Landlord, acting reasonably.

15.4 The Landlord may, at its option from time to time estimate the amount which may be payable by the Tenant pursuant to Section 14.3 and the Tenant will pay to the Landlord with the monthly payments of Rent as and when required hereunder its Proportionate Share thereof so that the Landlord will have sufficient funds on hand to pay the Operating Expenses and Taxes as they become due and payable. The Landlord will promptly refund to the Tenant any amount of any overpayment by the Tenant by reason that the estimate aforesaid paid by the Tenant exceeds the actual amount payable by the Tenant.

15.5 The certificate of an independent certified accountant appointed by the Landlord will in the event of a dispute be conclusive and binding upon the Landlord and the Tenant as to any amount payable from time to time under this Section 14.0 and the reasonable cost of obtaining such certificate is borne equally by the Landlord and the Tenant.

15.6 The Tenant shall pay good and services tax applicable to all Additional Rent payable hereunder.

16.0 ADDITIONAL RENT AND PRO RATA PORTION OF PAYMENTS

16.1 Any money payable by the Tenant to the Landlord hereunder other than the Basic Rent expressed in Section 3.0 and goods and services tax is deemed to be Rent and is paid as Additional Rent and is collectible as such and in the absence of any other provisions hereunder, is payable with the next ensuing monthly installment of Rent.

16.2 If the Term will commence or cease on a day other than the commencement or end of any period contemplated herein or if any money is payable hereunder for a period less than that contemplated in relation thereto, the Tenant will pay to the Landlord its Pro Rata Portion of the Rent or such payment for the period.

16.3 Goods and services tax payable hereunder shall not be deemed to be Rent, but the Landlord shall have all remedies for non-payment of goods and services tax payable as it would for Rent in arrears.

16.4 The Tenant acknowledges that the Tenant is required to pay provincial sales tax under the Social Services Tax Act on the parking stall charges set out in Section 29.1(b) and the Landlord shall have all remedies for non-payment of the sales tax payable as it would for Rent in arrears.

17.0 DEFAULT

17.1 The Tenant covenants with the Landlord that if the Tenant violates or neglects any covenant, agreement or stipulation herein contained on its part to be kept, performed or observed and any such default on the part of the Tenant continues for 15 days after written notice thereof to the Tenant by the Landlord (provided that if such default cannot reasonably be remedied within 15 days, then the Tenant shall not be in default if the Tenant commences to remedy the default within such 15-day period and proceeds with all reasonable diligence), or if any payments of Rent or any part thereof, whether the same are demanded or not, are not paid within five days after written demand by the Landlord, then and in any such case the Landlord in addition to any other remedy now or hereafter provided by law may at its option cancel and annul this Lease forthwith and re-enter and may remove all persons and property and may use such force and assistance in making such removal as the Landlord may deem advisable to recover at once full and exclusive possession of the Premises and such re-entry will not operate as a waiver or satisfaction in whole or in part of any right, claim or demand arising out of or connected with any breach or violations by the Tenant of any covenant or agreement on its part to be performed.

17.2 If the Term or any renewal thereof or any of the goods or chattels of the Tenant are at any time seized or taken in execution or attachment by any creditor of the Tenant or if the Landlord makes any assignment for the benefit of creditors or becomes bankrupt or insolvent or takes the benefit of any bankruptcy or insolvency legislation, the then current month’s Rent together with the Rent accruing for the next three months will immediately become due and payable, and the Term or any renewal thereof will at the option of the Landlord

become forfeit and void, and it is lawful for the Landlord at any time thereafter to re-enter into or upon the Premises or any part thereof in the name of the whole and the same to have again, repossess and enjoy as of its former estate, notwithstanding anything herein contained to the contrary and neither this Lease nor any interests therein nor any estate hereby created will pass or enure to the benefit of any trustee in bankruptcy or any receiver or assignee for the benefit of creditors or otherwise by operation of law.

18.0 DISTRESS

18.1 Whensoever the Landlord is entitled to levy distress against the goods and chattels of the Tenant it may use such force as it may deem necessary for the purpose and for gaining admission to the Premises without being liable for any action in respect thereof or for any loss or damage occasioned thereby and the Tenant hereby expressly releases the Landlord from all action, proceedings, claims or demand whatsoever for or on account or in respect of any such forcible entry or any loss or damage sustained by the Tenant in connection therewith.

19.0 LANDLORD'S EXPENSES ENFORCING LEASE

19.1 If it is necessary for the Landlord to retain the services of a solicitor or any other proper person for the purpose of assisting the Landlord in enforcing any of its rights hereunder in the event of default on the part of the Tenant which is substantiated by a court of law, it is entitled to collect from the Tenant the cost of all such services including all necessary court proceedings at trial or on appeal on a solicitor and own client basis as if the same were Rent reserved and in arrears hereunder.

20.0 WAIVER

20.1 The failure of either party to insist upon strict performance of any covenant or condition contained in this Lease or to exercise any right or option hereunder will not be construed as a waiver or relinquishment for the future of any such covenant, condition, right or option.

20.2 The acceptance of any Rent from or the performance of any obligation hereunder by a person other than the Tenant will not be construed as an admission by the Landlord of any right, title or interest of such person as a sub-Tenant, assignee, transferee or otherwise in the place and stead of the Tenant.

20.3 The acceptance by the Landlord of part payment of any sums required to be paid hereunder will not constitute waiver or release of the right of the Landlord to payment in full of such sums.

21.0 HOLD OVER

21.1 If at the expiration of the Term the Tenant continues occupation with the consent of the Landlord, the tenancy of the Tenant thereafter will, in the absence of written agreement to the contrary, be from month-to-month only at a rental per month equal to one hundred twenty-five percent of the monthly rental payable for the year immediately proceeding such expiration, payable monthly in advance on the first on the first day of each lease month and will be subject to all other terms and conditions of this Lease.

22.0 INABILITY TO PERFORM/FORCE MAJEURE

22.1 The Landlord does not warrant that any service of facility provided by it hereunder will be free from interruptions caused or required by strikes, riots, insurrections, labour controversies, force majeure, act of God or other cause or causes beyond the Landlord's reasonable care and control. No such interruptions will be deemed an eviction or disturbance of the Tenant's enjoyment of the Premises nor render the Landlord liable in damages to the Tenant nor relieve the parties from their obligations under this Lease provided that both parties will, without delay, take all reasonable steps to remove the cause of such interruption and minimize the delays.

22.2 All of the dates and payment obligations will be extended because of Force Majeure for the purposes hereof. Force Majeure means any delays by the Landlord or the Tenant in completing any of the terms, obligations, or conditions contained in the Offer to Lease, which delay is directly or indirectly caused by labour strikes, power failures, restrictive government laws or regulations not in place at the time of signing the Offer to Lease, riots, insurrections, sabotage, war, rebellion or acts of God or other causes beyond the Landlord's or the Tenant's reasonable control. No such interruption shall render the Landlord or the Tenant liable in damages to the other, nor relieve either party from its obligations under this Lease, provided that both parties shall, without delay, take all reasonable and practical steps within its power to remove the cause of such interruption and minimize the delays. This clause does not excuse delays caused by normal weather patterns within the Burnaby area.

23.0 RULES AND REGULATIONS

23.1 The Tenant and its servants, employees and agents will observe faithfully and comply strictly with such rules and regulations as the Landlord may from time to time adopt, acting reasonably and provided at least 30 days' prior written notice of any such rules and regulations shall be given to the Tenant. Nothing in this Lease contained will be construed to impose upon the Landlord any duty or obligation to enforce the rules

and regulations or the terms, covenants or conditions in any other lease against any other tenant of the Building, and the Landlord will not be liable to the Tenant for violation of the same by any other tenant, its servants, employees, agents, visitors or licensees.

23.2 The Landlord confirms that while the Tenant is the sole tenant of the Building, the Landlord will not adopt any rules and regulations under this Section 23.0, unless any such rules and regulations have been first approved in writing by the Tenant, acting reasonably.

24.0 LANDLORD'S RIGHT TO PERFORM

24.1 If the Tenant fails to perform any of the covenants or obligations of the Tenant under or in respect of this Lease beyond the applicable cure period provided for in this Lease, the Landlord may, upon giving the notice required hereunder to the Tenant, perform or cause to be performed any of such covenants or obligations or any part thereof. For such purpose, the Landlord may do such things as may be requisite and may enter upon the Premises to do such things and all expenses incurred and expenditures made by or on behalf of the Landlord will be paid forthwith by the Tenant to the Landlord. If the Tenant fails to pay the same, the Landlord may add the same to the Rent and recover the same by all remedies available to the Landlord for the recovery of Rent in arrears provided that if the Landlord commences or completes either the performance or the causing to be performed of any of such covenants or obligations or any part thereof, the Landlord will not be obliged to complete such performance of causing to be performed or be later obliged to act in like fashion.

25.0 REMEDIES CUMULATIVE

25.1 No remedy conferred upon or reserved to the Landlord herein by statute or otherwise is considered exclusive of any other remedy but the same is cumulative and is in addition to every other remedy available to the Landlord and all such remedies and powers of the Landlord may be exercised concurrently and from time to time and often as may be expedient by the Landlord.

26.0 LANDLORD'S LIMIT OF LIABILITY

26.1 The term "Landlord" as used in this Lease so far as covenants or obligations on the part of the Landlord are concerned is limited to mean the Landlord as herein before set out, while it retains its interest in the Land and Premises but upon a transfer of that interest, the Landlord is automatically relieved after the date of such transfer of all personal liability arising out of the requirement for performance of any obligations on

the part of the Landlord herein contained (except to the extent incurred prior to such transfer), provided that this release from liability will become effective only to the extent the transferee has expressly assumed in writing, subject to the limitations of this Section, all of the terms of this Lease to be performed on the part of the Landlord, it being intended hereby that the obligations contained in this Lease on the part of the Landlord is binding upon the Landlord, its successors and assigns, only during and in respect of the respective successive periods of their interest in the Land and Premises.

27.0 LETTER OF CREDIT

27.1 The Tenant shall, on or before the commencement of the Term, deliver to the Landlord an irrevocable unconditional letter of credit issued by a Canadian chartered bank payable to the Landlord in an amount of $1,000,000. The letter of credit shall be renewed by the Tenant during the first 5 years of the Term of the Lease in order to secure the Landlord against default of any obligations by the Tenant under this Lease. The amount of the letter of credit will decline as follows: Year 1 – 100% of amount above; Year 2 – 100% of amount above; Year 3 – 75% of amount above; Year 4 – 75% of amount above; and Year 5 – 25% of amount above. If the Tenant is in default of any of its obligations hereunder beyond the applicable cure period set out in this Lease during the first 5 years of the Term, the Landlord shall be entitled to make partial draws under the letter of credit provided that in the case of an non monetary default the Landlord has first provided the Tenant with 15 days written notice of its intention to do so and to apply the proceeds thereof to any Rent then due or in respect of any costs, expenses or losses incurred by the Landlord in respect of any default by the Tenant under this Lease. If any partial draw-down is made during the first 5 years, the Tenant shall, within 15 days thereafter, restore the letter of credit to the full amount required during the year such default was made as set out above, failing which the Landlord may convert the entire letter of credit to cash to be applied on account of Rent or to the Landlord’s damages arising from the Tenant’s default hereunder.

28.0 WHOLE OF AGREEMENT

28.1 The Tenant agrees that the Premises are leased by the Tenant without any representations or warranties other than as contained in this Lease and Offer to Lease and that no representative or Agent of the Landlord is or is authorized or permitted to make any representations with reference hereto or to vary or modify this Lease in any way, except in writing under seal, and that this Lease contains all of the agreements and conditions made between the parties hereto. The Offer to Lease shall survive execution of this Lease, provided that where this Lease expressly contradicts the Offer to Lease, this Lease shall govern.

29.0 USE OF COMMON AREAS/PARKING

29.1 With respect to the Common Areas and parking:

(a) The Landlord grants to the Tenant for the Term as an appurtenant part of this Lease, for use by the Tenant and its agents, invitees, servants, employees, licensees and customers, in common with the Landlord and its agents, invitees, servants, employees, and licensees, the non-exclusive right and licence to use the Common Areas for the purposes as provided herein and in accordance with good business practice, upon and subject to the covenants and conditions hereinafter expressed and in particular, without limiting the generality of the foregoing, such right, servitude, right-of-way and licence of use hereby granted to the Tenant shall include the right to use the parking areas (including the means of pedestrian and vehicular access and the entrances and exits to and from the Land and Building included therein) for the purposes of pedestrian and vehicular access to and from the Land and Building and the parking of vehicles in parking spaces provided therein; and

(b) the Tenant shall rent from the Landlord all the parking underground and all the parking in the surface parking lot immediately adjacent to the Building being a total of 149 legal stalls at the following rates:

(i) Forty-five ($45.00) Dollars per month per stall for the 27 surface stalls; and

(ii) Sixty ($60.00) Dollars per month per stall for the 122 underground parking stalls for the Term;

Parking rates shall be subject to applicable goods and services taxes, provincial sales tax under the Social Services Tax Act and to annual adjustments during the Term based upon prevailing market rates. The Tenant shall be entitled to park motorcycles and store bicycles in designated areas at no additional charge.

30.0 OPTIONS TO RENEW

30.1 If the Tenant is not then in material default of its covenants under the Lease, the Landlord shall grant to the Tenant upon eight (8) months' written notice prior to the expiration of the term or the applicable renewal term, as the case may be, two renewal leases each for a term of five (5) years upon the same terms and conditions contained herein, save as to Basic Rent, free rent, Landlord's (Base Building) Work,

Leasehold Improvement Allowance and/or any other inducement granted by the Landlord to the Tenant, plus GST, and as to any option to renew after the second renewal term. Basic Rent for said renewal term shall be agreed upon between the parties and shall be based on the fair market rental for premises of similar size, quality and location, excluding any improvements paid for by the Tenant over and above the Leasehold Improvement Allowance, at time of renewal, but shall not be less than the Basic Rent payable during the last year of the term of this Lease. The Landlord and Tenant shall attempt to agree on the fair market rental for the renewal term during the sixty (60) day period immediately preceding the expiry of the initial term. Failing agreement as to the rental rate, the rate shall be determined by a single arbitrator under the Commercial Arbitration Act of British Columbia.

31.0 LEASEHOLD IMPROVEMENT ALLOWANCE

31.1 For greater certainty, the Leasehold Improvement Allowance of $1,380,000.00 plus GST shall be paid by the Landlord to the Tenant within 15 days of the following being complete:

(a) the Lease having been executed by the Tenant and returned to the Landlord;

(b) the Tenant having submitted to the Landlord bona fide invoices as satisfactory evidence of payment of all of the Tenant's contractors in full for the Tenant's Work by the Tenant including, but not limited to, a statutory declaration that all fees and payments resulting from the modification and fixturing of the Premises have been paid;

(c) an occupancy permit and proof of substantial completion of the Tenant's Work as certified by the Tenant's consultants in writing have been provided by the Tenant to the Landlord; and

(d) all holdback periods applicable under the *Builders Lien Act* have expired and no builders liens have been filed. This condition under Section 31.1(d) shall apply to ten percent (10%) of the Leasehold Improvement Allowance.

31.2 Any unused portion of the Leasehold Improvement Allowance shall be credited to the Tenant in the form of free rent in addition to other free rent provided herein from the Commencement Date.

32.0 RIGHT OF FIRST OPPORTUNITY (BUILDING 8)

32.1 If the Landlord intends to lease space, except on a renewal of an existing lease, within Building 8 (the "Additional Space"), the Landlord shall deliver written notice (the "Notice") to the Tenant indicating its

intention to lease the Additional Space. The Tenant shall have 5 business days, following delivery of the Notice, to provide a written proposal (the "Tenant's Proposal") in respect of the Additional Space including rent, term and inducements to the Landlord. Following receipt of the Tenant's Proposal, the Landlord shall have 5 business days to accept or reject the Tenant's Proposal at the Landlord's sole discretion. If the Landlord accepts the Tenant's Proposal, a lease for the Additional Space shall be entered into generally in the form of this Lease upon the terms set out in the Tenant's Proposal. If the Landlord rejects the Tenant's Proposal, the Landlord shall not lease the Additional Space upon terms and conditions which are determined by the Landlord, acting reasonably, to be less favourable to the Landlord than those set out in the Tenant's Proposal including a consideration of the covenant/financial standing of the proposed tenant. If the Landlord does not so lease the Additional Space within six (6) months of the original Notice, the terms of this provision shall again apply to any proposed leasing of the Additional Space for a period expiring on the first anniversary of the substantial completion of the Building. If, following delivery of a Notice, the Tenant does not submit a Tenant's Proposal, the Landlord shall be free to lease the Additional Space upon such terms and conditions as the Landlord shall determine. The Tenant acknowledges that the intent of this right of first opportunity is to provide an opportunity for the Tenant to obtain additional premises proximate to the Premises as the Tenant's business expands and not to create a commercial opportunity for the Tenant in the real estate market. While any lease of the Additional Space will permit the Tenant to sublet the Additional Space with the prior written consent of the Landlord having been first obtained with such consent not to be unreasonably or arbitrarily withheld or delayed the lease shall contain the following limitations with respect to any sublease of the Additional Space:

(a) the Tenant is not allowed to profit on any subletting and shall be prohibited from subletting any of the Additional Space on financial terms more favorable to the Tenant than the Tenant's financial obligations to the Landlord set out in the lease for the Additional Space;

(b) to the extent there are revenues or other monetary benefits to the Tenant arising out of any sublease of any Additional Space in excess of the monetary obligations of the Tenant to the Landlord then the benefits whether by way of increased rent or otherwise shall be for the sole account of the Landlord;

(c) for the purposes of subsections (a) and (b), any increased rent or other benefits obtained by the Tenant in any sublease of the Additional Space from any subtenant arising solely from any benefit to the subtenant from any leasehold or other improvements installed or constructed by the Tenant in the sublease premises at the cost and expense of the Tenant over

and above any leasehold improvement or similar allowance provided to the Tenant by the Landlord in any lease for the Additional Space, shall not be deemed to be profit, revenue or other monetary benefit to the Tenant for which the Tenant must account to the Landlord;

(d) the Landlord shall not be obligated to pay any inducement, leasehold improvement allowance or provide any other benefit provided to the Tenant in any lease for the Additional Space to any subtenant;

(e) the Tenant, despite any sublease, shall not be released in any manner from any covenant to be observed or performed by the Tenant in any lease for the Additional Space; and

(f) in any advertising or other promotion of any sublease premises in the Additional Space the Tenant and any agent or broker on behalf of the Tenant shall not print, publish, post, display or broadcast including in any electronic format any reference to the lease rate being offered by the Tenant for sublease premises in the Additional Space.

33.0 NOTICES

33.1 Any notice required or contemplated by any provision of this Lease or which the Landlord or Tenant may desire to give to the other is sufficiently given by personal delivery or by registered letter, postage prepaid and mailed in one of the Canada Post Offices in the City of Vancouver, British Columbia, and addressed to the party to whom such notice is to be given at the address of such party as given in this Lease or at such other address as either party may notify the other of in writing during the Term, if to the Tenant, addressed to the Premises and any such notice is effective as of the day of such personal delivery or as of the day four days following the date of such posting as the case may be.

34.0 INTERPRETATION

34.1 This Indenture is construed in accordance with laws of British Columbia.

34.2 Where required the singular number is deemed to include the plural and the neuter gender the masculine or feminine and the captions herein are for convenience only and will not constitute a part of this Lease.

34.3 The definition of any words used in any Section of this lease will apply to such words when used in any other Section hereof whenever the context is consistent.

34.4 In case of more than one Tenant, the said grants, covenants, conditions, provisos, agreements, rights, powers, privilege and liabilities is construed and held to be several as well as joint.

34.5 THIS INDENTURE will enure to the benefit of and be binding upon the parties hereto and their respective heirs, executors, administrators, successors and permitted assigns.

IN WITNESS WHEREOF each of the parties hereto has affixed its hand or corporate seal to these presents on the day and year first above written.

THIS LEASE is not valid unless countersigned by the Landlord.

THE COMMON SEAL of DISCOVERY PARKS INCORPORATED was hereunto affixed in the presence of:

/s/ (illegible) C/S
Authorized Signatory

/s/ (illegible)
Authorized Signatory

THE COMMON SEAL of XENON GENETICS INC. was hereunto affixed in the presence of:

/s/ (illegible)
Authorized Signatory C/S

/s/ (illegible)
Authorized Signatory

LEASE SURVEYS

@

3650 GILMORE WAY, BURNABY

(ACCORDING TO BOMA STANDARDS)

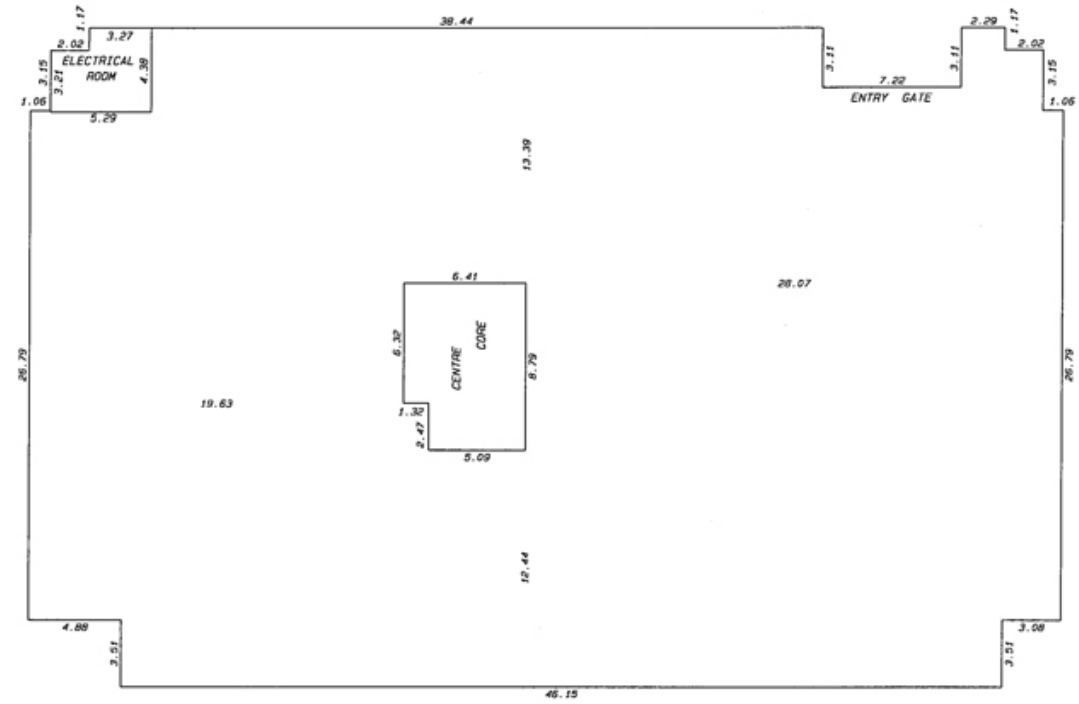
MATSON PECK AND TOPLISS
SURVEYORS AND ENGINEERS
210 - 8171 Cook Road
Richmond, B.C.
V6Y 3T8
Ph: 270-9331
Fax: 270-4137
CAD File : 12999-L. FIN

DATE: JAN. 26, 2001

PARKING LEVEL P2

SCALE 1 : 200

DIMENSIONS SHOWN ARE TO THE OUTSIDE OF ALL WALLS.



MATSON, PECK & TOPLISS

JOB NO. B00 - 12999

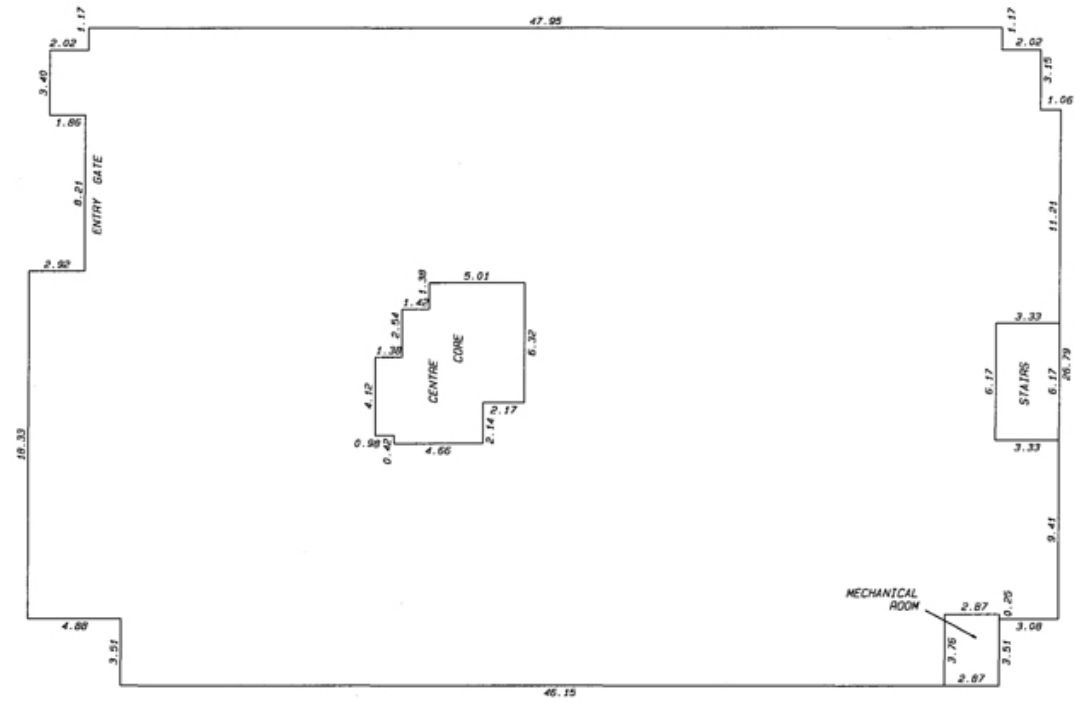
CADFILE: 12999-L.FIN

ELECTRICAL ROOM	20.8 m^2	(224 sq.ft.)
CENTRE CORE	53.1 m^2	(572 sq.ft.)
TOTAL =	73.9 m^2	(796 sq.ft.)

PARKING LEVEL P1

SCALE 1 : 200

DIMENSIONS SHOWN ARE TO THE OUTSIDE OF ALL WALLS.



MATSON, PECK & TOPLISS

JOB NO. 800 - 12999

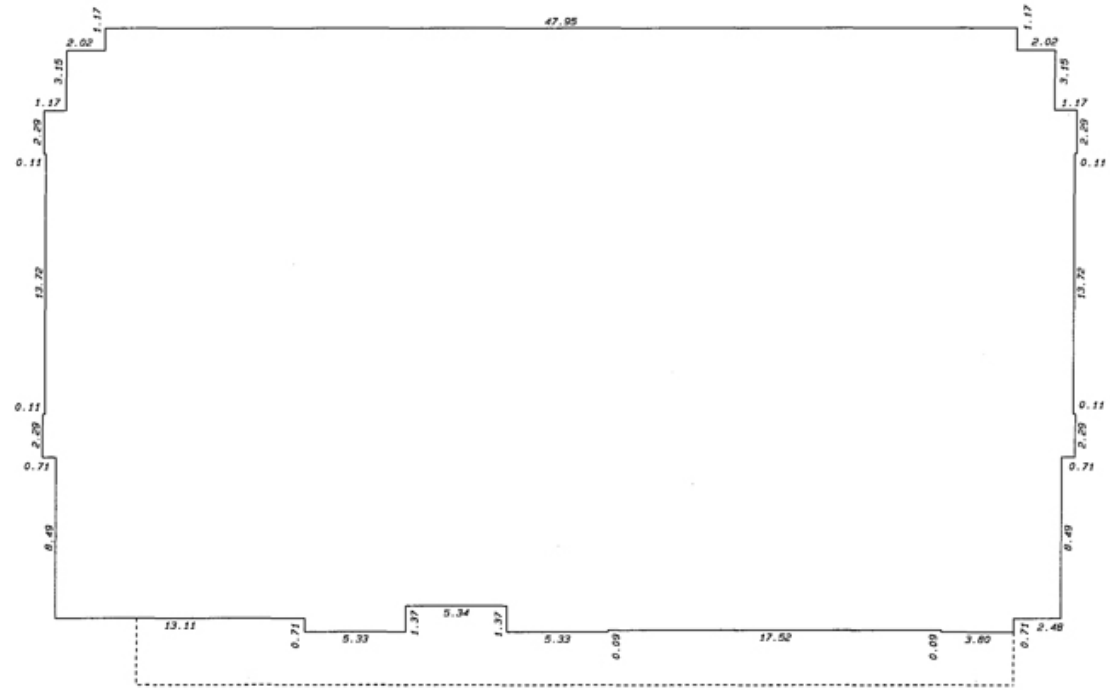
CADFILE: 12999-L.100

CENTRE CORE	53.7 m^2	(578 sq.ft.)
STAIRS	20.5 m^2	(221 sq.ft.)
MECHANCIAL ROOM	10.8 m^2	(116 sq.ft.)
TOTAL	85.0 m^2	(915 sq.ft.)

GROUND FLOOR

SCALE 1 : 200

DIMENSIONS SHOWN ARE TO THE OUTSIDE OF ALL WALLS.



MATSON, PECK & TOPLISS

JOB NO. 800 - 12999

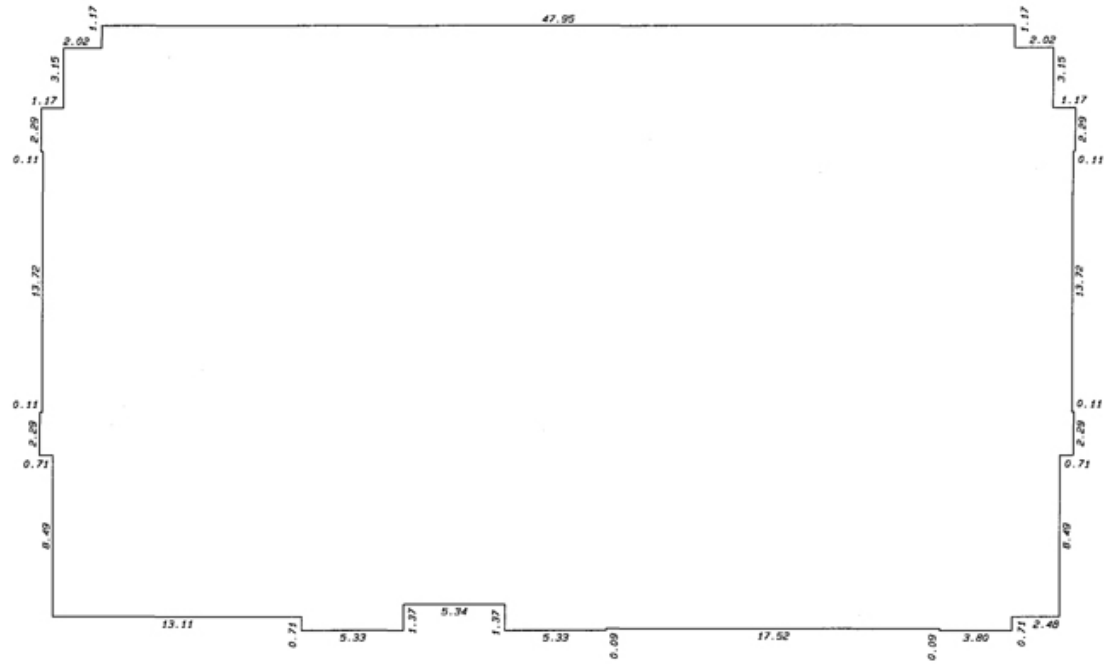
CADFILE: 12999-L.100

GROUND FLOOR AREA 1677.9 m^2 (18061 sq.ft.)

SECOND FLOOR

SCALE 1 : 200

DIMENSIONS SHOWN ARE TO THE OUTSIDE OF ALL WALLS.



MATSON, PECK & TOPLISS

JOB NO. B00 - 12999

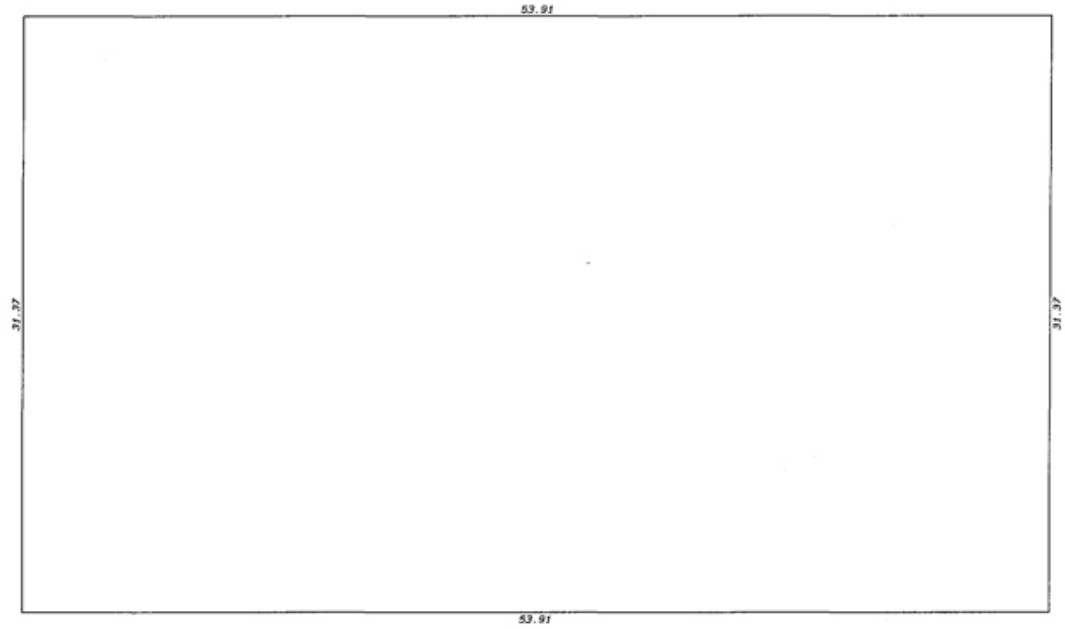
CADFILE: 12999-L.100

SECOND FLOOR AREA 1677.9 m^2 (18061 sq.ft.)

THIRD FLOOR

SCALE 1 : 200

DIMENSIONS SHOWN ARE TO THE OUTSIDE OF ALL WALLS.



MATSON, PECK & TOPLISS

JOB NO. B00 - 12999

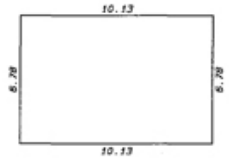
CADFILE: 12999-L.100

THIRD FLOOR AREA 1691.2 m^2 (18204 sq.ft.)

ROOF

SCALE 1 : 200

DIMENSIONS SHOWN ARE TO THE OUTSIDE OF ALL WALLS.



PENTHOUSE ROOF AREA 68.7 m^2 (739 sq.ft.)

MATSON, PECK & TOPLISS

JOB NO. B00 - 12999

CADFILE: 12999-L.100

3650 GILMORE WAY, BURNABY - BUILDING 10

FLOOR	AREA - SQUARE METRES	AREA - SQUARE FEET
P2	**73.9**	**796**
P1	**85.0**	**915**
GROUND	**1677.9**	**18061**
SECOND	**1677.9**	**18061**
THIRD	**1691.2**	**18204**
ROOF	**68.7**	**739**
TOTAL	**5274.6**	**56776**

MATSON PECK AND TOPLISS
SURVEYORS AND ENGINEERS
210 - 8171 Cook Road
Richmond, B.C.
V6Y 3T8
Ph: 270-9331
Fax: 270-4137

LEASE EXTENSION AND MODIFICATION AGREEMENT

THIS AGREEMENT made effective the **8th day of November, 2010**.

BETWEEN:

CONCERT REAL ESTATE CORPORATION

(the "Landlord")

AND:

XENON PHARMACEUTICALS INC.

(the "Tenant")

WHEREAS:

A. By a lease made in 2001 (the "Lease") between Discovery Parks Incorporated (the "Original Landlord") and Xenon Genetics Inc. (the "Original Tenant"), the Original Tenant leased certain premises (the "Premises") on the property known as **3650 Gilmore Way, Burnaby, British Columbia**, as more particularly described in the Lease, for a term of ten (10) years expiring on April 14, 2011;

B. The Landlord is the successor in interest to the Original Landlord;

C. The Tenant is the successor in interest to the Original Tenant;

D. The Landlord and the Tenant acknowledge and agree that the recitals hereto are true and incontrovertible;

E. The Landlord and the Tenant have agreed to extend the term of the Lease and to amend the Lease in the manner set out herein.

THEREFORE in consideration of the premises, the mutual covenants and agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by each of the parties hereto, the parties agree as follows:

1. For the purposes of this Agreement and unless there is a definition specifically herein contained, any words, terms or phrases that are defined in the Lease shall have the same meaning herein.

2. The Landlord hereby leases the Premises to the Tenant for a further term of **Four (4) Months and Sixteen (16) Days** (the "Extended Term") commencing on **April 15, 2011** and terminating on **August 31, 2011**, on and subject to the terms of the Lease, except as amended herein.

3. For the Extended Term, the Basic Rent will be as follows on the first day of each and every calendar month:

Extended Term	Basic Rent Per Square Foot Per Annum	Monthly Installments
From April 15, 2011 up to and including August 31, 2011	$ 19.50	$92,261.00

For greater certainty, the Tenant shall also pay all Additional Rent as required, in accordance with the Lease throughout the Extended Term.

4. Save and except for any of the Landlord's obligations to maintain and repair the Premises, as set out in the Lease, the Tenant acknowledges that the Landlord is leasing the Premises to the Tenant on an "as is" basis, that the Landlord has no obligation to make or carry out any improvements, alterations or other work to prepare the Premises for occupancy by the Tenant and that the Landlord has no obligation to provide any tenant improvement allowance, free rent or other inducement to the Tenant or otherwise with respect to the extension of the term of the Lease provided for in this Agreement.

5. The Landlord and the Tenant agree that the **Fixturing Period** clause and the **Leasehold Improvement Allowance** in **Sections 10.0 and 31.0** of the Lease have been completed and satisfied and shall not apply to the Extended Term.

6. The parties confirm and ratify the terms and conditions contained in the Lease as amended by this Agreement.

7. This Agreement will, from the date of this Agreement, be read and construed together with the Lease, and this Agreement, as amended hereby, shall continue in full force and effect for the remainder of the term of the Lease in accordance with the terms thereof and hereof.

8. This Agreement will enure to the benefit of and be binding upon the heirs, executors, administrators, successors and permitted assigns of the parties.

9. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same document.

10. This Agreement may be executed by the parties and transmitted by facsimile and if so executed and transmitted, this Agreement shall be for all purposes as effective as if the parties had delivered an executed original Agreement.

11. The Landlord and the Tenant confirm that the Landlord is currently not holding any security deposits for the Premises.

IN WITNESS WHEREOF the parties have executed this Agreement as of the date first above written.

CONCERT REAL ESTATE CORPORATION

By: /s/ (illegible)
Name:
Title:

By: /s/ (illegible)
Name:
Title:

XENON PHARMACEUTICALS INC.

By: /s/ Simon Pimstone
Name: Simon Pimstone
Title: President & CEO

By: /s/ (illegible)
Name:
Title:

LEASE EXTENSION AND MODIFICATION AGREEMENT

THIS AGREEMENT made effective the **7th day of February, 2011**.

BETWEEN:

CONCERT REAL ESTATE CORPORATION

(the "Landlord")

AND:

XENON PHARMACEUTICALS INC.

(the "Tenant")

WHEREAS:

A. By a lease made in 2001 (the "Original Lease") between Discovery Parks Incorporated (the "Original Landlord") and Xenon Genetics Inc. (the "Original Tenant"), the Original Tenant leased certain premises (the "Premises") on the property known as **3650 Gilmore Way, Burnaby, British Columbia**, as more particularly described in the Original Lease, for a term of ten (10) years expiring on April 14, 2011;

B. The Landlord is the successor In interest to the Original Landlord;

C. The Tenant is the successor in interest to the Original Tenant;

D. By a lease extension and modification agreement made effective November 8, 2010 (the "Modification") between the Landlord and the Tenant, the Landlord and the Tenant agreed to extend the term of the Original Lease for an additional four (4) months and sixteen (16) days, for a term expiring on August 31, 2011, as further described in the Modification (the Original Lease as modified by the Modification is referred to herein as the "Lease");

E. The Landlord and the Tenant acknowledge and agree that the recitals hereto are true and incontrovertible;

F. The Landlord and the Tenant have agreed to extend the term of the Lease and to amend the Lease in the manner set out herein.

THEREFORE in consideration of the premises, the mutual covenants and agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by each of the parties hereto, the parties agree as follows:

1. For the purposes of this Agreement and unless there is a definition specifically herein contained, any words, terms or phrases that are defined in the Lease shall have the same meaning herein.

2. The Landlord hereby leases the Premises to the Tenant for a further term of **Four (4) Months** (the "Second Extended Term") commencing on **September 1, 2011** and terminating on **December 31, 2011**, on and subject to the terms of the Lease, except as amended herein.

3. For the Second Extended Term, the Basic Rent will be as follows on the first day of each and every calendar month:

Second Extended Term	Basic Rent Per Square Foot Per Annum	Monthly Installments
From September 1, 2011 up to and including December 31, 2011	$ 19.50	$92,261.00

For greater certainty, the Tenant shall also pay all Additional Rent as required, in accordance with the Lease throughout the Second Extended Term.

4. Save and except for any of the Landlord's obligations to maintain and repair the Premises, as set out in the Lease, the Tenant acknowledges that the Landlord is leasing the Premises to the Tenant on an "as is" basis, that the Landlord has no obligation to make or carry out any improvements, alterations or other work to prepare the Premises for occupancy by the Tenant and that the Landlord has no obligation to provide any tenant improvement allowance, free rent or other inducement to the Tenant or otherwise with respect to the extension of the term of the Lease provided for in this Agreement.

5. The parties confirm and ratify the terms and conditions contained in the Lease as amended by this Agreement

6. This Agreement will, from the date of this Agreement, be read and construed together with the Lease, and this Agreement, as amended hereby, shall continue in full force and effect for the remainder of the term of the Lease in accordance with the terms thereof and hereof.

7. This Agreement will enure to the benefit of and be binding upon the heirs, executors, administrators, successors and permitted assigns of the parties.

8. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same document.

9. This Agreement may be executed by the parties and transmitted by facsimile and if so executed and transmitted, this Agreement shall be for all purposes as effective as if the parties had delivered an executed original Agreement.

10. The Landlord and the Tenant confirm that the Landlord is currently not holding any security deposits for the Premises.

IN WITNESS WHEREOF the parties have executed this Agreement as of the date first above written.

CONCERT REAL ESTATE CORPORATION

By: /s/ (illegible)
Name:
Title:

By: /s/ (illegible)
Name:
Title:

XENON PHARMACEUTICALS INC.

By: /s/ Karen Corraini
Name: Karen Corraini
Title: General Counsel & Corporate Secretary

By:
Name:
Title:

LEASE EXTENSION AND MODIFICATION AGREEMENT

THIS AGREEMENT made effective the **1st day of June, 2011**.

BETWEEN:

CONCERT REAL ESTATE CORPORATION

(the “Landlord”)

AND:

XENON PHARMACEUTICALS INC.

(the “Tenant”)

WHEREAS:

A. By a lease made in 2001 (the “Original Lease”) between Discovery Parks Incorporated (the “Original Landlord”) and Xenon Genetics Inc. (the “Original Tenant”), the Original Tenant leased certain premises (the “Premises”) on the property known as **3650 Gilmore Way, Burnaby, British Columbia**, as more particularly described in the Original Lease, for a term of ten (10) years expiring on April 14, 2011;

B. The Landlord is the successor in interest to the Original Landlord;

C. The Tenant is the successor in interest to the Original Tenant;

D. By a lease extension and modification agreement made effective November 8, 2010 (the “First Modification”) between the Landlord and the Tenant, the Landlord and the Tenant agreed to extend the term of the Original Lease for an additional four (4) months and sixteen (16) days, for a term expiring on August 31, 2011, as further described in the First Modification;

E. By a lease extension and modification agreement made effective February 7, 2011 (the “Second Modification”) between the Landlord and the Tenant, the Landlord and the Tenant agreed to extend the term of the Original Lease for an additional four (4) months, for a term expiring on December 31, 2011, as further described in the Second Modification (the Original Lease as modified by the First Modification and the Second Modification is referred to herein as the “Lease”);

F. The Landlord and the Tenant acknowledge and agree that the recitals hereto are true and incontrovertible;

The Landlord and the Tenant have agreed to extend the term of the Lease and to amend the Lease in the manner set out herein.

THEREFORE in consideration of the premises, the mutual covenants and agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by each of the parties hereto, the parties agree as follows:

1. For the purposes of this Agreement and unless there is a definition specifically herein contained, any words, terms or phrases that are defined in the Lease shall have the same meaning herein.

2. The Landlord hereby leases the Premises to the Tenant for a further term of **Three (3) Months** (the "Third Extended Term") commencing on **January 1, 2012** and terminating on **March 31, 2012**, on and subject to the terms of the Lease, except as amended herein.

3. For the Third Extended Term, the Basic Rent will be as follows on the first day of each and every calendar month:

Third Extended Term	Basic Rent Per Square Foot Per Annum	Monthly Installments
From January 1, 2012 up to and including March 31, 2012	$ 19.50	$92,261.00

For greater certainty, the Tenant shall also pay all Additional Rent as required, in accordance with the Lease throughout the Third Extended Term.

4. Save and except for any of the Landlord's obligations to maintain and repair the Premises, as set out in the Lease, the Tenant acknowledges that the Landlord is leasing the Premises to the Tenant on an "as is" basis, that the Landlord has no obligation to make or carry out any improvements, alterations or other work to prepare the Premises for occupancy by the Tenant and that the Landlord has no obligation to provide any tenant improvement allowance, free rent or other inducement to the Tenant or otherwise with respect to the extension of the term of the Lease provided for in this Agreement.

5. The parties confirm and ratify the terms and conditions contained in the Lease as amended by this Agreement.

6. This Agreement will, from the date of this Agreement, be read and construed together with the Lease, and this Agreement, as amended hereby, shall continue in full force and effect for the remainder of the term of the Lease in accordance with the terms thereof and hereof.

7. This Agreement will enure to the benefit of and be binding upon the heirs, executors, administrators, successors and permitted assigns of the parties.

8. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same document.

9. This Agreement may be executed by the parties and transmitted by facsimile and if so executed and transmitted, this Agreement shall be for all purposes as effective as if parties had delivered an executed original Agreement.

10. The Landlord and the Tenant confirm that the Landlord is currently not holding y security deposits for the Premises.

IN WITNESS WHEREOF the parties have executed this Agreement as of the e first above written.

CONCERT REAL ESTATE CORPORATION

By: /s/ (illegible)
Authorized Signatory

By: /s/ (illegible)
Authorized Signatory

XENON PHARMACEUTICALS INC.

By: /s/ Tarek S. Mansour
Authorized Signatory

By: /s/ (illegible)
Authorized Signatory

END OF DOCUMENT

3650 GILMORE WAY
BURNABY, BC (BUILDING)

OFFER TO LEASE

BETWEEN

CONCERT REALTY SERVICES LTD. ON BEHALF OF,

CONCERT REAL ESTATE CORPORATION

(LANDLORD)

AND

XENON PHARMACEUTICALS INC.

(TENANT)

Colliers Macaulay NicoIls Inc. (Agent)

Norm Taylor (604) 661-0893 and Ray Ahrens (604) 662-2632

Corporate Representation Group

OFFER TO LEASE

3650 GILMORE WAY
BURNABY, BC

("BUILDING")

TO: CONCERT REALTY SERVICES LTD., ON BEHALF OF CONCERT REAL ESTATE CORPORATION — **hereinafter called the ("Landlord")**

9th Floor, 1190 Hornby Street
Vancouver, BC V6Z 2K5

WE: XENON PHARMACEUTICALS INC. — **hereinafter called the ("Tenant")**

3650 Gilmore Way
Burnaby, BC V5G 4W8

The Tenant hereby offers to lease from the Landlord, through Colliers Macaulay NicolIs Inc., ("Agent"), in consideration of the rents, covenants and agreements contained in this offer to lease (the "Offer"), the Leased Premises (hereinafter defined) upon the following terms and conditions:

1. LEASED PREMISES

The premises (the "Leased Premises") shall be those premises in the Building having a Rentable Area of approximately thirty-four thousand **(34,000) square feet**, being the entire ground (1st) and second (2nd) floors, to be adjusted for the area required by the Landlord to create an entrance lobby and upon conversion to a multi-tenant building.

The actual Rentable Area of the Leased Premises, including any Additional Area, shall be measured by the Landlord's professional surveyor in accordance with the Lease and ANSI/BOMA Z65.1-1996 standards within thirty (30) days of the Commencement Date.

2. TERM

The term term (the "Term") of the Lease shall be one hundred twenty **(120) months**, **commencing on the 1st day of September 2011** (the "Commencement Date") and expiring on the 31st day of August, 2021 (the "Expiration Date"), subject to the terms of the Lease.

3. BASIC RENT

The Basic Rent shall be payable by the Tenant to the Landlord in advance on the first day of each month during the Term, based on the Rentable Area of the Leased Premises. The Basic Rent, in dollars per rentable square foot per annum, shall be:

Years one (1) through five (5)	**—**	**$19.50**
Remainder of Term	**—**	**$21.00**

The Tenant shall have a Free Basic Rent period being September 1, 2011 through to January 15, 2012. During this period, the Tenant shall pay to the Landlord its Proportionate Share of Operating Costs and Property Taxes and abide by all other terms of the Lease.

4. OPERATING COSTS AND PROPERTY TAXES

In addition to Basic Rent, the Tenant shall be responsible for paying its proportionate share of operating expenses and property taxes, on a monthly basis, in advance on the first day of each month (the "Operating Costs and Property Taxes" to be defined in the Lease), which shall include all actual and reasonable costs incurred by the Landlord in operating, servicing, maintaining, insuring, repairing and managing the Leased Premises. The Operating Costs and Property Taxes are estimated at Seven Dollars and Thirty-Five Cents ($7.35) per square foot of Rentable Area for the fiscal year of the Building ending September 30, 2010.

The Landlord shall arrange and be financially responsible for all installation costs for separate metering of all utilities supplied to the Tenant, pursuant to the Lease. This may be by way of a sub-meter and include third-party monitoring which shall form part of the Tenant's Operating Costs.

5. DEPOSIT

The Landlord and the Tenant acknowledge and agree that the Landlord is currently not holding any security deposit for the Premises.

Upon the conditional mutual acceptance of this Offer, the Tenant shall submit a deposit cheque to Colliers International, in trust, in the amount of **$89,964.00**, which will be held by the Landlord as security deposit without interest, as further described in the Lease.

6. LEASE

The Lease shall be in the form of the existing Lease, allowing for reasonable amendments thereto as requested by the Landlord and Tenant. The final form of Lease, including the terms and conditions of this Offer and all agreed amendments thereto shall be delivered by the Landlord to the Tenant within ten (10) business days after unconditional acceptance of this Offer. The Lease shall be executed and delivered by the Tenant to the Landlord within five (5) business days of receipt by the Tenant.

7. LANDLORD'S WORK

The Leased Premises shall be accepted by the Tenant on an "as is" basis with the exception of the Landlord's Work outlined on **Schedule "B"** attached hereto. The Landlord's work shall be completed by the Landlord as close to the Commencement Date as feasible and to the building standard. The Tenant acknowledges and agrees that if Landlord's Work is required, some of this Landlord's Work may have to be done after the Tenant vacates the third (3rd) floor of the Building.

The Tenant acknowledges and agrees that during such time when the Landlord, or its appointed contractors, sub-contractors, or employees is/are conducting the Landlord's Work in the Building, the Tenant will be in the Leased Premises in common with the Landlord, its contractors, sub-contractors, or employees. The Landlord will make reasonable efforts to ensure that the operation of the Tenant's business is not disrupted during the Landlord's Work period; however, the Tenant acknowledges and agrees that during the Landlord's

Work period, there will be disruptions throughout the Tenant's business hours (or after business hours) and the Tenant shall make its best commercial efforts to co-operate with the Landlord, its appointed contractors, sub-contractors, or employees during the Landlord's Work period to ensure that the Landlord's Work proceeds efficiently.

8. LEASEHOLD IMPROVEMENT ALLOWANCE

The Landlord will pay to the Tenant as a contribution towards the cost of the Tenant's leasehold improvements (the "Tenant's Work"), **Twenty-five Dollars ($25.00) per square foot** of Rentable Area of the Leased Premises (plus applicable taxes) (the "Allowance"). This Allowance shall be payable upon the completion of the items listed hereto in Schedule "C", which shall be incorporated into the Landlord's standard Tenant Work Agreement forming part of the Lease. Should the Tenant's Work cost less than the Allowance, the difference will be applied in reduction of the Basic Rent and Operating Costs and Property Taxes payments due under the Lease to a maximum of up to Ten Dollars ($10.00) per square foot of Rentable Area of the Leased Premises, plus applicable taxes.

9. CONDITIONS PRECEDENT - TENANT

This Offer and Acceptance is subject to the following Conditions Precedent being waived at the sole discretion of the Tenant:

(a) The Tenant's senior managements' and Board of Directors' unfettered approval of this Offer to Lease by February 28, 2011 or such other time as may be subsequently agreed.

If the Tenant fails to notify the Landlord in writing that the Conditions Precedent have been satisfied or waived within the above noted respective timelines, then this Offer shall become null and void and neither party shall have further obligation to the other. This clause is for the sole benefit of the Tenant.

In consideration of $10.00 non-refundable paid by the Tenant to the Landlord, and other good and valuable consideration (the receipt and sufficiency of which the Landlord acknowledges), the Landlord agrees not to revoke this Offer while it remains subject to the foregoing Tenant's Conditions.

10. FIRST OPPORTUNITY TO LEASE

Provided that the Tenant did not exercise the Option to Expand in Clause 11 of this Offer to Lease and has not been in material breach of the Lease, the Tenant shall have the first opportunity to lease any space becoming available for lease **that is not encumbered by another lease** on the third (3rd) floor of the Building at any time during the Term of the Tenant's Lease. The Basic Rent payable on the said space shall be the current fair market rental as agreed to by the parties, and failing such agreement, as determined by arbitration pursuant to the Commercial Arbitration Act of British Columbia. The Tenant shall have the right to assign this First Opportunity to Lease pursuant to the permitted assignment of all rights under the Lease.

11 OPTION TO EXPAND

Upon providing written notice to the Landlord no later than February 28, 2011, the Tenant shall have the option to lease the entire 3rd floor of the building on the same terms and conditions as the Leased Premises, subject to para 13.

The third (3rd) floor of the Building shall be leased to the Tenant on an "as-is, where-is" basis and the Landlord will not be required to complete the Landlord's Work attached hereto as Schedule "B".

12. OPTION TO RENEW

Provided the Tenant has not been in breach of the Lease, the Tenant shall have the right to extend the Term of the Lease with respect to the Leased Premises and any additional space leased for an additional two (2) consecutive term(s) of five (5) years on the same terms and conditions as contained in the Lease, save only the Basic Rent, any free rent, landlord's work, tenant allowances, or other tenant inducements and this option to renew. To exercise this right, the Tenant shall give written notice to the Landlord no earlier than twelve (12) months and no later than nine (9) months prior to the Expiration Date or the expiry of the immediately preceding extension period (as the case may be), and if such notice is not given, this option to extend shall be deemed waived and of no further effect and any additional extension periods will also be null and void. The Basic Rent payable during each such extension period shall be the fair market rent for the Leased Premises, taking into account the inducements being offered in the market and excluding the value of any improvements that have been constructed at the expense of the Tenant. In any event, the Basic Rent per annum shall not be less than the Basic Rent payable in the last year of the expiring term. In the event that Landlord and Tenant are unable to reach agreement on the Basic Rent, the Basis Rent shall be determined by arbitration pursuant to the Commercial Arbitration Act of British Columbia.

13. RIGHT OF TERMINATION

Provided that the Tenant has not been in material breach of the Lease, the Tenant shall have the right to surrender the Lease on or at any time after the forty-eighth (48th) month of the Term (the "Right to Terminate") by providing a minimum of twelve (12) months prior written notice to the Landlord and, upon providing written notice to cancel the Lease, paying a surrender fee calculated as the unamortized portion of the Allowance, the unamortized portion of real estate commissions paid by the Landlord, and two (2) months gross rent, plus applicable taxes. For the purpose of this calculation, the Allowance and commissions shall be amortized over the Term of the Lease at an effective interest rate of 7% per annum, compounded semi-annually.

Provided that the Tenant has exercised its option to lease the 3rd floor and that the Tenant has not been in material breach of the Lease, the Tenant shall have the right to surrender the 3rd floor on or at any time after the thirty-sixth (36th) month of the Term by providing a minimum of twelve (12) months prior written notice to the Landlord and, upon providing written notice to cancel the Lease, paying a surrender fee calculated as the 3rd floor proportion, based upon rentable area, of the unamortized portion of the Allowance, the unamortized portion of real estate commissions paid by the Landlord, and two (2) months gross rent, plus applicable taxes. For the purpose of this calculation, the Allowance and commissions shall be amortized over the Term of the Lease at an effective interest rate of 7% per annum, compounded semi-annually.

14. PARKING

The Tenant shall be provided surface and underground parking stalls based on its proportionate share and in common with other tenants in the Building (if any) on a first-come, first-served basis (random stalls), free of any monthly parking charge for the Term of the Lease and any renewals thereof. The Tenant may designate underground parking spaces allocated to it for use as storage areas or other uses and may fence these off or construct demising walls, subject to the Landlord's approval and compliance with building codes, and subject to not impeding access to the balance of the parking stalls. The Tenant covenants that all fencing or demised walls for such storage areas shall be removed at the Tenant's sole cost and expense prior to Lease expiry and all damages caused by such removal shall be repaired by the Tenant at its sole cost and expense.

15. RESTORATION

Upon surrender of all or a part of the third (3rd) floor, in the event that the Landlord elects to require the Tenant to demolish improvements to pare 8.4 of the current lease, the Tenant shall not be responsible for any costs associated with construction of corridors, demising walls and the modifications to the Building's mechanical and electrical systems (subject to Clause 4 of this Offer) for converting the floor for multi-tenant use in compliance with building codes. The Tenant shall similarly not be responsible for any costs associated with converting the main floor lobby or other portions of the Building for multi-tenant purposes.

Upon expiry of the Term of the Lease (as extended by this Offer) of the 1st and 2nd floor Leased Premises, or any permitted renewal/cancellation thereof, the Tenant shall only be responsible for removing any leasehold improvements or Tenant's Work to a maximum amount of $800,000.00 plus applicable taxes.

16. SIGNAGE

The Tenant shall be granted non-exclusive signage on the Building, subject to the terms and conditions in the Lease, all existing exterior signage shall remain in place during the Term of the Lease and any extension thereto, and signage shall remain exclusive to the Tenant until such time as the Tenant surrenders the 3rd floor.

17. USE

The Leased Premises shall be used for the purpose of general business office, the development, research and production of pharmaceuticals, the operation of a vivarium and any other use permitted under the applicable zoning by-laws for the Building.

The Landlord has made no representation or warranty to the Tenant concerning any aspect of the Building or the Premises and ,the Tenant is solely responsible for satisfying itself concerning the suitability of the Premises for their intended use by the Tenant, the applicable zoning and use restriction by-laws, and availability of permits.

18. SOLE AGREEMENT

There are no agreements, covenants, representations, warranties or conditions in any way relating to the subject matter of this agreement expressed or implied, collateral or otherwise, except as expressly set forth herein.

19. TAXES

Amounts referred to in this Offer that are quoted without the goods and services tax or harmonized sales taxes such shall be subject to applicable taxes.

20. TIME OF THE ESSENCE

Time is of the essence of this agreement with respect to the covenants contained herein.

21. DEFINITIONS

Words defined in the Lease and used herein shall have the same meaning ascribed to them by the Lease. This Offer, if accepted, shall constitute a binding agreement between the parties to enter into the Lease and to abide by the terms and conditions contained herein.

22. OFFER PROVISIONS

All provisions of this Offer shall not survive the completion of this transaction. In the event of any conflict between the terms of this Offer and the terms of the Lease, the terms of the Lease shall prevail.

23. DISCLOSURE

The Landlord and the Tenant acknowledge and agree that, In accordance with section 5.10 of the real Estate Services Act, and in accordance with the Code of Ethics of the Canadian Real Estate Association:

(a) Concert Realty Services Ltd. (“Concert”) has disclosed that it is working solely on behalf of the Landlord. The Landlord declares that it is solely responsible for any remuneration payable to Concert.

(b) Colliers Macaulay Nicolls Inc. (the “Agent’) has disclosed that it is representing only the Tenant in the transaction described in this Agreement;

(c) the Agent, In order to accommodate the transaction described in this Agreement, was and is entitled to pass any relevant information they receive from either party or from any other source to either of the parties as the Agent sees fit, without being in conflict of their duties to either party; and

(d) the Agent’s commission, calculated as Six Dollars ($6.00) per square foot of rentable area plus applicable taxes, shall be payable by the Landlord as follows:

Fifty percent (50%) upon fun execution of the Lease; and

Fifty percent (50%) upon the Lease Commencement Date.

24. ACCEPTANCE

This Offer shall be irrevocable and open for acceptance until 4:00 PM on the 25th day of November, 2010, after which time if not accepted this Offer shall be null and void. This Offer may be accepted by signing and returning one duplicate copy or facsimile of this Offer.

DATED this 23rd day of November, 2010.

XENON PHARMACEUTICALS INC.

TENANT

Per: /s/ Simon Pimstone
(Authorized Signatory)

The Landlord hereby accepts the above Offer this 9th day of November, 2010.

CONCERT REALTY SERVICES LTD., ON BEHALF OF
CONCERT REAL ESTATE CORPORATION

LANDLORD

Per: /s/ (illegible)
(Authorized Signatory)

Attachments

1. Deleted
2. Schedule “B”: Landlord’s Work
3. Schedule “C”: Allowance

SCHEDULE "B"

LANDLORD'S WORK

Attached to and forming part of an Offer to Lease by Xenon Pharmaceuticals Inc. to Concert Realty Services Ltd., on behalf of, Concert Real Estate Corporation.

The Landlord will, at its own expense, complete the following work on the Main and Third (3rd) floors of the Building in accordance with Clause 7 of this Offer to Lease, in respect of the common areas of the building, and, to the extent that they are affected, the Leased Premises:

(a) Where required, construct demising walls;

(b) Install double full height glass entrance doors plus full height solid core exit doors complete with magnetic card access system tied into the building security system;

(c) Reconfigure Heating, Ventilation and Air Conditioning (HVAC) ;

(d) Reconfigure automatic sprinkler system;

(e) Reconfigure elevator and entrance lobbies;

(f) Modify the security system to provide the Leased Premises with autonomous security.

(g) Replace any cracked, chipped or stained ceiling acoustic tiles or drywall ceilings with new or like new matching acoustic ceiling tiles and finishes (in common area only);

(h) Where required by building code, the Landlord shall be responsible for seismic upgrades to base building T-bar ceiling, lighting systems and base building mechanical systems.

The Tenant acknowledges and agrees that during such time when the Landlord, or its appointed contractors, sub-contractors, or employees is/are conducting the Landlord's Work in the Building, the Tenant will be in the Leased Premises or the Additional Area in common with the Landlord, its contractors, sub-contractors, or employees. The Landlord will make reasonable efforts to ensure that the, operation of the Tenant's business is not disrupted during the Landlord's Work period; however, the Tenant acknowledges and agrees that during the Landlord's Work period, there will be disruptions throughout the Tenant's business hours (or after business hours) and the Tenant shall make its best commercial efforts to co-operate with the Landlord, its appointed contractors, sub-contractors, or employees during the Landlord's Work period to ensure that the Landlord's Work proceeds efficiently.

SCHEDULE "C"

ALLOWANCE

The Landlord will pay to the Tenant an Allowance in accordance with Clause 8 of this Offer payable within ten (10) days after the completion of all of the following:

(a) execution and delivery of the Lease by the Tenant to the Landlord as well as full compliance by the Tenant with all Tenant obligations of the Lease;

(b) commencement of the Lease in accordance with the Offer;

(c) completion by the Tenant of the Tenant's Work as stipulated in the Lease;

(d) the applicable statutory lien holdback period shall have expired and any liens that may have been filed against the Leased Premises or the property with respect to the work done by or on behalf of the Tenant with respect to the Leased Premises shall have been discharged from title to the property; and

(e) receipt by the Landlord of:

  (i) a copy of the Tenant's final Inspection Permit for the Premises and a copy of the Tenant's business license;

  (ii) a statutory declaration by a principal of the Tenant of payment in full of all costs relating to the work done by the Tenant on the Premises;

  (iii) copies of receipted invoices for the Tenant's Work substantiating the amount that has been expended and paid for by the Tenant;

  (iv) a letter from the Workers' Compensation Board of B.C. confirming that the Tenant and its general contractor have satisfied all assessment requirements of the Board to the date which is thirty (30) days following the date of substantial completion of the Tenant's Work;

  (v) a copy of the certificate of completion signed by the payment certifier in respect of the Tenant's Work; and

  (vi) Certificate of Substantial Completion from the Tenant's contractor.

END OF DOCUMENT

Addendum/Amendment

This addendum/amendment dated for reference **February 7, 2011** shall be attached to and become part of the offer to lease accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010 (the "Offer") between Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation ("Landlord") and Xenon Pharmaceuticals Inc. ("Tenant") for the premises described as **the first (1st) and second (2nd) floor of 3650 Gilmore Way, Burnaby, British Columbia**.

A) The Landlord and the Tenant agree to amend Clause 2 of the Offer as follows:

"2. TERM

The term (the "Term") of the Lease shall be one hundred twenty (120) months, commencing on the **1st day of January, 2012** (the "Commencement Date") and expiring on the 31st day of **December, 2021** (the "Expiration Date"), subject to the terms of the Lease."

B) The Landlord and the Tenant agree to amend the last paragraph of Clause 3 of the Offer as follows:

"The Tenant shall have a Free Basic Rent period being **January 1, 2012** through to **May 15, 2012**. During this period, the Tenant shall pay to the Landlord Its Proportionate Share of Operating Costs and Property Taxes and abide by all other terms of the Lease."

C) The Landlord and the Tenant hereby agree to amend the first paragraph of Clause 7 of the Offer as follows:

"7. LANDLORD'S WORK

The Leased Premises shall be accepted by the Tenant on an "as Is" basis with the exception of the Landlord's Work outlined on Schedule "B" attached hereto. The Landlord's Work shall be completed by the Landlord **at mutually accepted date(s) and time(s) between the Landlord and the Tenant** and to the building standard. The Tenant acknowledges and agrees that If Landlord's Work Is required, some of this Landlord's Work may have to be done after the Tenant vacates the third (3rd) floor of the Building."

D) The Landlord and the Tenant hereby agree to extend the Condition Precedent as outlined In Clause 9 of the Offer as follows:

"9. CONDITIONS PRECEDENT — TENANT

This Offer and Acceptance Is subject to the following Conditions Precedent being waived at the sole discretion of the Tenant:

(a) The Tenant's senior managements' and Board of Directors' unfettered approval of this Offer to Lease by **May 31, 2011** or such other time as may be subsequently agreed.

If the Tenant falls to notify the Landlord in writing that the Conditions Precedent have been satisfied or waived within the above noted respective timelines, then this Offer shall become null and void and neither party shall have further obligation to the other. This clause is for the sole benefit of the Tenant.

In consideration of $10.00 non-refundable paid by the Tenant to the Landlord, and other good and valuable consideration (the receipt and sufficiency of which the Landlord acknowledges), the Landlord agrees not to revoke this Offer while it remains subject to the foregoing Tenant's Conditions."

E) The Landlord and the Tenant hereby agree to extend the Condition Precedent as outlined in Clause 11 of the Offer as follows:

"11. OPTION TO EXPAND

Upon providing written notice to the Landlord no later than **May 31, 2011**, the Tenant shall have the option to lease the entire 3rd floor of the building on the same terms and conditions as the Leased Premises, subject to para 13.

The third (3rd) floor of the Building shall be leased to the Tenant on an "as-is, where-is" basis and the Landlord will not be required to complete the Landlord's Work attached hereto as Schedule "B"."

ALL OTHER TERMS AND CONDITIONS TO REMAIN IN FULL FORCE AND EFFECT

AGREED and ACCEPTED this 14th of February, 2011.

/s/ (illegible)

Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation

AGREED and ACCEPTED this of February, 2011.

/s/ Karen G. Corraini

Xenon Pharmaceuticals Inc.

Addendum/Amendment

This addendum/amendment dated for reference **June 1, 2011** shall be attached to and become part of the offer to lease accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010 and the addendum/amendment dated for reference February 7, 2011 (together, the "Offer") between Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation ("Landlord") and Xenon Pharmaceuticals Inc. ("Tenant") for the premises described as the **first (1st) and second (2nd) floor of 3650 Gilmore Way, Burnaby, British Columbia**.

A) The Landlord and the Tenant agree to amend Clause 2 of the Offer as follows:

Amended From:

"2. TERM

The term (the "Term") of the Lease shall be one hundred twenty (120) months, commencing on the **1st day of January, 2012** (the "Commencement Date") and expiring on the 31st day of **December, 2021** (the "Expiration Date"), subject to the terms of the Lease."

Amended To:

"2. TERM

The term (the "Term") of the Lease shall be one hundred twenty (120) months, commencing on the **1st day of April, 2012** (the "Commencement Date") and expiring on the **31st day of March, 2022** (the "Expiration Date"), subject to the terms of the Lease."

B) The Landlord and the Tenant agree to amend the last paragraph of Clause 3 of the Offer as follows:

Amended From:

"The Tenant shall have a Free Basic Rent period being **January 1, 2012** through to **May 15, 2012**. During this period, the Tenant shall pay to the Landlord its Proportionate Share of Operating Costs and Property Taxes and abide by all other terms of the Lease."

Amended To:

"The Tenant shall have a Free Basic Rent period being **April 1, 2012** through to **August 15, 2012**. During this period, the Tenant shall pay to the Landlord its Proportionate Share of Operating Costs and Property Taxes and abide by all other terms of the Lease."

C) The Landlord and the Tenant hereby agree to extend the Condition Precedent as outlined in Clause 9 of the Offer as follows:

"9. CONDITIONS PRECEDENT — TENANT

This Offer and Acceptance is subject to the following Conditions Precedent being waived at the sole discretion of the Tenant:

(a) The Tenant's senior managements' and Board of Directors' unfettered approval of this Offer to Lease by **August 31, 2011** or such other time as may be subsequently agreed.

If the Tenant falls to notify the Landlord In writing that the Conditions Precedent have been satisfied or waived within the above noted respective timelines, then this Offer shall become null and void and neither party shall have further obligation to the other. This clause is for the sole benefit of the Tenant.

In consideration of $10.00 non-refundable paid by the Tenant to the Landlord, and other good and valuable consideration (the receipt and sufficiency of which the Landlord acknowledges), the Landlord agrees not to revoke this Offer while it remains subject to the foregoing Tenant's Conditions."

D) The Landlord and the Tenant hereby agree to extend the Condition Precedent as outlined in Clause 11 of the Offer as follows:

"11. OPTION TO EXPAND

Upon providing written notice to the Landlord no later than **August 31, 2011**, the Tenant shall have the option to lease the entire 3rd floor of the building on the same terms and conditions as the Leased Premises, subject to pars 13.

The third (3rd) floor of the Building shall be leased to the Tenant on an "as-is, where-is" basis and the Landlord will not be required to complete the Landlord's Work attached hereto as Schedule "B"."

ALL OTHER TERMS AND CONDITIONS TO REMAIN IN FULL FORCE AND EFFECT.

AGREED and ACCEPTED this 3rd day of June, 2011.

/s/ (illegible)

Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation

AGREED and ACCEPTED this 28th day of June, 2011.

/s/ Simon Pimstone

Xenon Pharmaceuticals Inc.

ADDENDUM / AMENDMENT #3

This Amendment/Addendum #3 dated for reference the **31st** day of **August, 2011** shall be attached to and become a part of the **Offer to Lease** accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010, as amended by the Addendum/ Amendments dated for reference February 7, 2011 and June 1, 2011 (together, the "**Agreement**") between **Concert Real Estate Corporation** (**Landlord**) and **Xenon Pharmaceuticals Inc.** (**Tenant**)

Address: **3650 Gilmore Way, Burnaby, B.C.**

The Landlord and Tenant hereby agree for good and valuable consideration, to amend the Agreement as noted below:

A. Clause 6 of the Agreement shall be amended, as follows:

The term "within ten (10) business days after unconditional acceptance of this Offer",

shall be deleted and replaced with the following:

"within ten (10) business days after the date on which the Landlord has received the Surrender Notice from the Tenant (as referenced under Clause 11 of this Agreement)".

B. Clause 8 of the Agreement shall be amended by adding the following new sentence to the end of that Clause:

"The Landlord and the Tenant further confirm and agree that, at the Tenant's discretion, the the Landlord will pay the above-noted Allowance to the Tenant In two (2) separate installments, In such amounts and on such dates as may be requested by the Tenant. For the avoidance of doubt, the Landlord and the Tenant further confirm and agree that any surrender fee payable under Clause 13 of the Agreement, shall be calculated only on the unamortized portion of the Allowance actually paid to the Tenant by the Landlord, in addition to the unamortized portion of the real estate commissions, and the two (2) months gross rent, as indicated above."

C. Clause 11 of the Agreement shall be amended, as follows:

"11. OPTION TO EXPAND

Upon providing written notice to the Landlord no later than August 31, 2011, the Tenant shall have the option to lease the entire 3" floor of the building on the same terms and conditions as the Leased premises, subject to para 13,

The third (3rd) floor of the Building shall be leased to the Tenant on an "as-is, where-is" basis and the Landlord will not be required to complete the landlord's Work attached hereto as Schedule "B"."

shall be deleted and replaced with the following:

"11. OPTION TO SURRENDER

From September 1 through to September 30, 2011, the Tenant shall have the right to surrender and terminate that portion of the Leased Premises identified by heavy black marking on Exhibit "A" (the "**Expansion Premises**") attached hereto at no cost or penalty, and the Landlord shall be responsible for all costs associated with multi-tenanting the floor to meet current building code In the event this option Is exercised (subject to the Landlord's restoration rights within Section 8.4 of the current lease). The Tenant shall provide written notice to the Landlord, on or prior to September 30, 2011, respecting whether (or not) it intends to exercise its right to surrender the Expansion Premises (the "**Surrender Notice**)". Such Surrender Notice may be delivered personally, by fax, or by courier, to the Landlord at the following address

Concert Real Estate Corporation
9th Floor,
1190 Hornby
Vancouver, BC
V6Z 2K5

Fax Number: 804-689-9611.

In the event that the Tenant does not deliver the Surrender Notice to the Landlord on or before September 30, 2011 as noted above, the Tenant shall be deemed to have delivered such Surrender Notice to the Landlord on October 1, 2011, and in such deemed Surrender Notice shall be deemed to have surrendered the Expansion Premises."

D. Clause 13 of the Agreement shall be amended as follows:

"13. RIGHT OF TERMINATION

The second line with the Right of Termination Clause which reads:

"have the right to surrender the Lease on or at any time after the forty-eight (48th) month of"

Shall be deleted and replaced with the following::

"have the right to surrender the Lease on or at any time after the thirty-sixth(36th) month of"

E. The Landlord and the Tenant agree to amend Clause 9 of the Agreement, as follows:

The Tenant hereby removes its Condition Precedent within Clause 9, namely:

"9. CONDITIONS PRECEDENT - TENANT

"This Offer and Acceptance is subject to the following Conditions Precedent being waived at the sole discretion of the Tenant:

(a) The Tenant's senior managements' and Board of Directors' unfettered approval of this Offer to Lease by August 31, 2011 or such other time as may be subsequently agreed.

If the Tenant fails to notify the Landlord In writing that the Conditions Precedent have been satisfied or waived within the above noted respective timelines, then this Offer shall become null and void and neither party shall have further obligation to the other. This clause is for the sole benefit of the Tenant.

In consideration of $10.00 non-refundable paid by the Tenant to the Landlord, and other good and valuable consideration (the receipt and sufficiency of which the Landlord acknowledges), the Landlord agrees not to revoke this Offer while it remains subject to the foregoing Tenant's Conditions."

Save and except as hereby amended, all of the terms and conditions of the Agreement are hereby ratified and confirmed and shall be in full force and effect, and time remains of the essence thereof. The Agreement, including this Amendment/Addendum #3 shall enure to the benefit of, .and be binding upon the parties hereto and their respective successors and permitted assigns. This Amendment/Addendum #3 may be executed and delivered in counterpart by facsimile or otherwise and each counterpart shall constitute an original and together shall constitute one and the same agreement.

The parties hereby acknowledge that all conditions precedent have been removed/waived and the Agreement is now a firm and binding contract between the parties.

CONCERT REALTY SERVICES LTD., on behalf of
CONCERT REAL ESTATE CORPORATION
(Landlord)

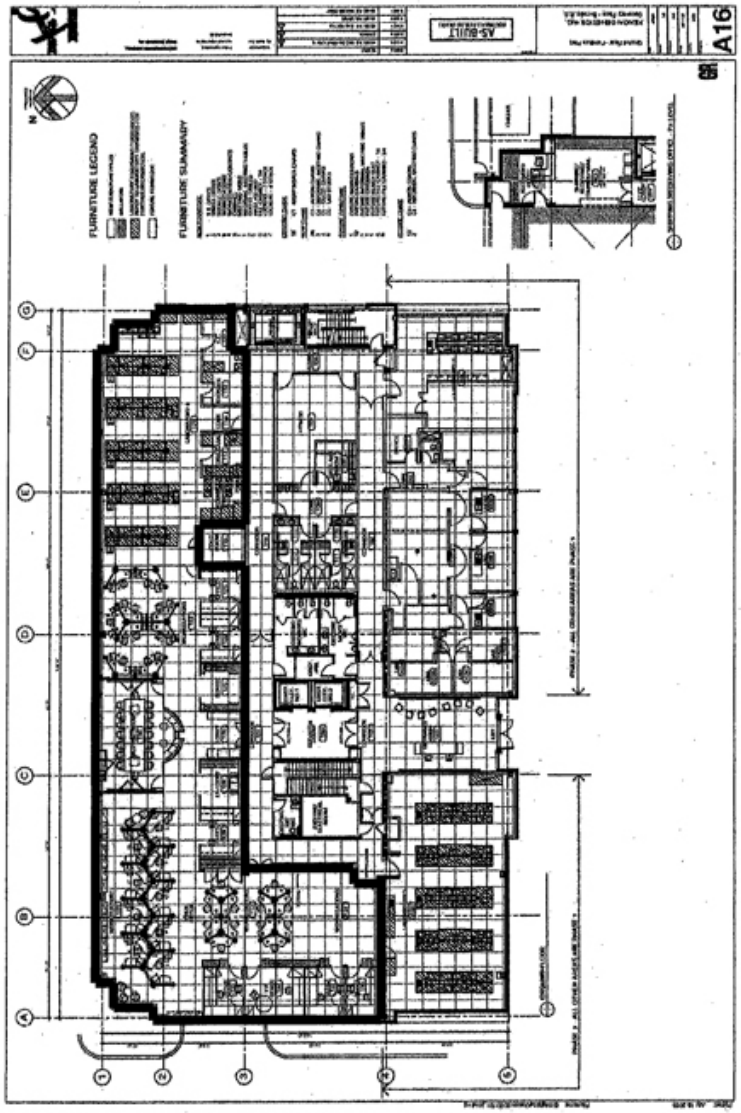
/s/ (illegible) August 31, 2011
Authorized Signatory

XENON PHARMACEUTICALS INC.
(Tenant)

/s/ Simon Pimstone August 31, 2011
Authorized Signatory

Exhibit A

(See attached)


A16
FURNITURE LEGEND
FURNITURE SUMMARY

ADDENDUM / AMENDMENT #4

This Amendment/Addendum #4 dated for reference the **30th** day of **September, 2011** shall be attached to and become a part of the **Offer to Lease** accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010, as amended by the Addendum/ Amendments dated for reference February 7, 2011, June 1, 2011 and August 31, 2011 (together, the "**Agreement**") between **Concert Real Estate Corporation** (**Landlord**) and **Xenon Pharmaceuticals Inc.** (**Tenant**)

Address: **3650 Gilmore Way, Burnaby, B.C.**

The Landlord and Tenant hereby agree for good and valuable consideration, to amend the Agreement as noted below:

Exhibit "A" to the Agreement shall be deleted and replaced with the Exhibit "A" attached hereto.

Save and except as hereby amended, all of the terms and conditions of the Agreement are hereby ratified and confirmed and shall be in full force and effect, and time remains of the essence thereof. The Agreement, including this Addendum/Amendment #4 shall "enure" to the benefit of, and be binding upon the parties hereto and their respective successors and permitted assigns. This Addendum/Amendment #4 may be executed and delivered in counterpart by facsimile or otherwise and each counterpart shall constitute an original and together shall constitute one and the same agreement.

The parties hereby acknowledge that all conditions precedent have been removed/waived and the Agreement is now a firm and binding contract between the parties.

CONCERT REALTY SERVICES LTD., on behalf of
CONCERT REAL ESTATE CORPORATION
(Landlord)

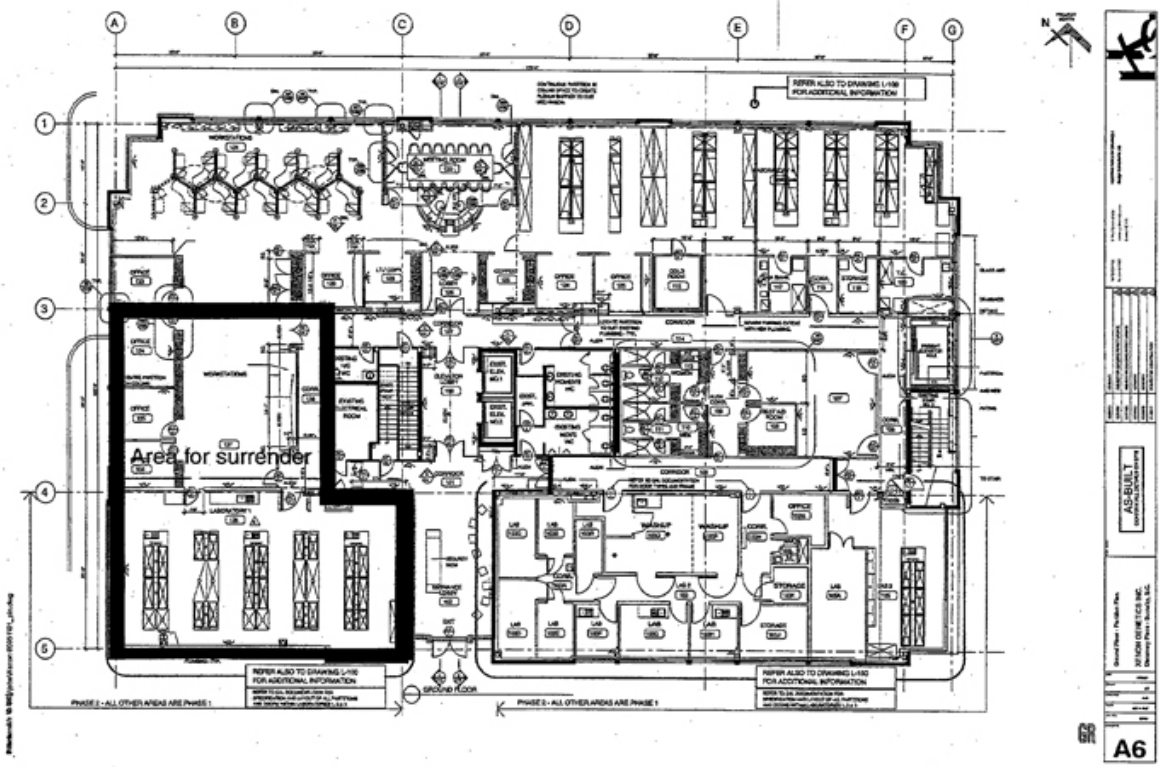
/s/ (illegible) September 30, 2011
Authorized Signatory

XENON PHARMACEUTICALS INC.
(Tenant)

/s/ Simon Pimstone September 30, 2011
Authorized Signatory

Exhibit A

(See attached)


Area for surrender
REFER ALSO TO DRAWING L-100 FOR ADDITIONAL INFORMATION
REFER ALSO TO DRAWING L-100 FOR ADDITIONAL INFORMATION
REFER ALSO TO DRAWING L-100 FOR ADDITIONAL INFORMATION
PHASE 2 - ALL OTHER AREAS ARE PHASE 1
PHASE 2 - ALL OTHER AREAS ARE PHASE 1
GROUND FLOOR
AS-BUILT
XEROX GEMETICS INC.
A6

September 30, 2011

Delivered by Fax to 604-689-9611

Concert Real Estate Corporation
9th Floor
1190 Hornby
Vancouver, BC
V6Z 2K5

Re: **Surrender Notice**, pursuant to **Offer to Lease** respecting 3650 Gilmore Way, Burnaby, BC. accepted by Concert Real Estate Corporation (the "**Landlord**") on November 9, 2010 and accepted by **Xenon Pharmaceuticals Inc**. (the "**Tenant**") on November 23, 2010, as amended by the (4) Addendum/Amendments dated for reference February 7, 2011, June 1, 2011, August 31, 2011 and September 30, 2011 (together, the "**Agreement**")

Dear Sirs/Madams:

As set out in Clause 11 of the Agreement (and as specifically referenced under Addendum/Amendment #3 dated August 31, 2011 of same), the Tenant hereby provides notice to the Landlord that is has surrendered that portion of the Leased Premises identified by heavy marking on Exhibit "A" attached.

Kindly acknowledge receipt of this notice, by signing where indicated below, and returning, a copy of this letter by fax to the Tenant (to the attention of the President & CEO with copy to General Counsel), at 604-484-3450(fax).

Sincerely,

XENON PHARMACEUTICALS INC.
(Tenant)

/s/ Simon N. Pimstone September 30, 2011
Simon N. Pimstone
President & CEO

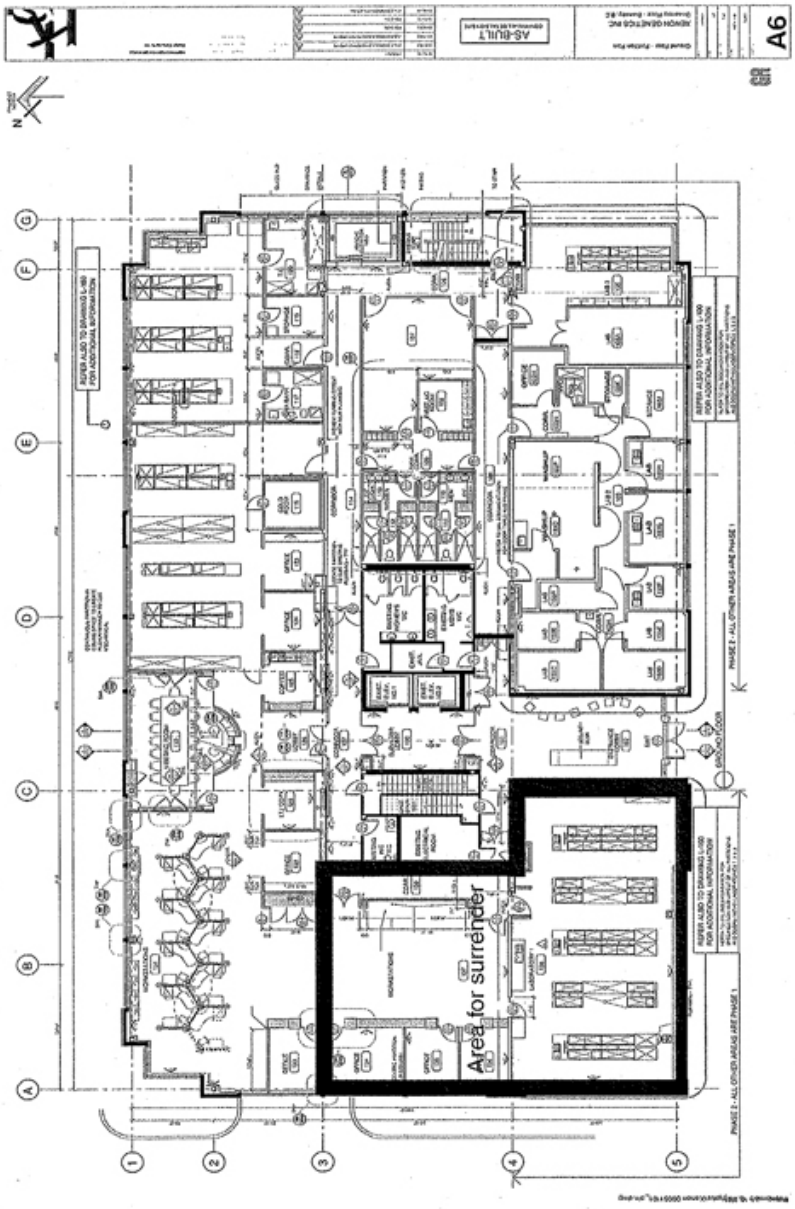
Receipt of this notice is hereby confirmed and acknowledged by the Landlord

CONCERT REALTY SERVICES LTD., on behalf of
CONCERT REAL ESTATE CORPORATION
(Landlord)

/s/ Allen Glazer, VP Property Management Date: _____
Authorized Signatory

Exhibit A

(See attached)


A6
AS-BUILT
Area for surrender

Addendum/Amendment #5

This addendum/amendment dated for reference the **19th day of October, 2011** shall be attached to and become part of the offer to lease accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010, the addendum/amendment dated for reference February 7, 2011, the addendum/amendment dated for reference June 1, 2011, the addendum/amendment #3 dated for reference August 31, 2011, and the addendum/amendment #4 dated for reference September 30, 2011 (together, the "Offer") between Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation ("Landlord") and Xenon Pharmaceuticals Inc. ("Tenant").

Address: **3650 Gilmore Way, Burnaby, British Columbia**

The Landlord and the Tenant hereby agree to amend the **Lease** clause in Clause 6 of the Offer as follows:

"6. LEASE

The Lease shall be in the form of the existing Lease, allowing for reasonable amendments thereto as requested by the Landlord and Tenant. The final form of Lease, including the terms and conditions of this Offer and all agreed amendments thereto shall be delivered by the Landlord to the Tenant **on or before October 28, 2011**. The Lease shall be executed and delivered by the Tenant to the Landlord within five (5) business days of receipt by the Tenant".

ALL OTHER TERMS AND CONDITIONS TO REMAIN IN FULL FORCE AND EFFECT.

AGREED and ACCEPTED this **19th day of October, 2011**.

/s/ (illegible)

Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation

AGREED and ACCEPTED this **19th day of October, 2011**.

/s/ Karen G. Corraini

Xenon Pharmaceuticals Inc.
KAREN G. CORRAINI
GENERAL COUNSEL & CORPORATE SECRETARY

Addendum/Amendment #6

This addendum/amendment dated for reference the **28th day of October, 2011** shall be attached to and become part of the offer to lease accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010, the addendum/amendment dated for reference February 7, 2011, the addendum/amendment dated for reference June 1, 2011, the addendum/amendment #3 dated for reference August 31, 2011, the addendum/amendment #4 dated for reference September 30, 2011, and the addendum/amendment #5 dated for reference October 19, 2011 (together, the "Offer") between Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation ("Landlord") and Xenon Pharmaceuticals Inc. ("Tenant").

Address: **3650 Gilmore Way, Burnaby, British Columbia**

The Landlord and the Tenant hereby agree to amend the **Lease** clause in Clause 6 of the Offer as follows:

"6. LEASE

The Lease shall be in the form of the existing Lease, allowing for reasonable amendments thereto as requested by the Landlord and Tenant. The final form of Lease, including the terms and conditions of this Offer and all agreed amendments thereto shall be delivered by the Landlord to the Tenant **on or before November 9, 2011**. The Lease shall be executed and delivered by the Tenant to the Landlord within **ten (10)** business days of receipt by the Tenant."

ALL OTHER TERMS AND CONDITIONS TO REMAIN IN FULL FORCE AND EFFECT.

AGREED and ACCEPTED this **28th day of October, 2011**.

/s/ (illegible)

Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation

AGREED and ACCEPTED this **28th day of October, 2011**.

/s/ Karen G. Corraini

Xenon Pharmaceuticals Inc.

Addendum/Amendment #7

This addendum/amendment dated for reference the **9th day of November, 2011** shall be attached to and become part of the offer to lease accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010, the addendum/amendment dated for reference February 7, 2011, the addendum/amendment dated for reference June 1, 2011, the addendum/amendment #3 dated for reference August 31, 2011, the addendum/amendment #4 dated for reference September 30, 2011, the addendum/amendment #5 dated for reference October 19, 2011, and the addendum/amendment #6 dated for reference October 28, 2011 (together, the "Offer") between Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation ("Landlord") and Xenon Pharmaceuticals Inc. ("Tenant").

Address: **3650 Gilmore Way, Burnaby, British Columbia**

The Landlord and the Tenant hereby agree to amend the **Lease** clause In Clause 6 of the Offer as follows:

"6. LEASE

The Lease shall be in the form of the existing Lease, allowing for reasonable amendments thereto as requested by the Landlord and Tenant. The final form of Lease, including the terms and conditions of this Offer and all agreed amendments thereto shall be delivered by the Landlord to the Tenant **on or before November 10, 2011**. The Lease shall be executed and delivered by the Tenant to the Landlord within **ten (10)** business days of receipt by the Tenant."

ALL OTHER TERMS AND CONDITIONS TO REMAIN IN FULL FORCE AND EFFECT.

AGREED and ACCEPTED this **9th day of November, 2011**.

/s/ (illegible)

Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation

AGREED and ACCEPTED this **14th day of November, 2011**.

/s/ Simon Pimstone

Xenon Pharmaceuticals Inc.

Addendum/Amendment #8

This addendum/amendment dated for reference the **25th day of November, 2011** shall be attached to and become part of the offer to lease accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010, the addendum/amendment dated for reference February 7, 2011, the addendum/amendment dated for reference June 1, 2011, the addendum/amendment #3 dated for reference August 31, 2011, the addendum/amendment #4 dated for reference September 30, 2011, the addendum/amendment #5 dated for reference October 19, 2011, the addendum/amendment #6 dated for reference October 28, 2011, the addendum/amendment #7 dated for reference November 9, 2011 (together, the "Offer") between Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation ("Landlord") and Xenon Pharmaceuticals Inc. ("Tenant").

Address: **3650 Gilmore Way, Burnaby, British Columbia**

The Landlord and the Tenant hereby agree to amend the **Lease** clause In Clause 6 of the Offer as follows:

"6. LEASE

The Lease shall be in the form of the existing Lease, allowing for reasonable amendments thereto as requested by the Landlord and Tenant. The Landlord's proposed final form of Lease, Including the terms and conditions of this Offer and all agreed amendments thereto shall be delivered by the Landlord to the Tenant on or before 2 p.m (Vancouver time) on November 28, 2011. The Lease shall be **mutually agreed by both parties and executed by both parties on or before November 29, 2011 at 5:00 p.m. (Vancouver Time)**."

ALL OTHER TERMS AND CONDITIONS TO REMAIN IN FULL FORCE AND EFFECT.

AGREED and ACCEPTED this **25th day of November, 2011**.

/s/ (illegible)

Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation

AGREED and ACCEPTED this **25th day of November, 2011**.

/s/ Karen G. Corraini

Xenon Pharmaceuticals Inc.

Addendum/Amendment #9

This addendum/amendment dated for reference the **29th day of November, 2011** shall be attached to and become part of the offer to lease accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010, the addendum/amendment dated for reference February 7, 2011, the addendum/amendment dated for reference June 1, 2011, the addendum/amendment #3 dated for reference August 31, 2011, the addendum/amendment #4 dated for reference September 30, 2011, the addendum/amendment #5 dated for reference October 19, 2011, the addendum/amendment #6 dated for reference October 28, 2011, the addendum/amendment #7 dated for reference November 9, 2011, and the addendum/amendment #8 dated for reference November 25, 2011 (together, the "Offer") between Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation ("Landlord") and Xenon Pharmaceuticals Inc. ("Tenant").

Address: **3650 Gilmore Way, Burnaby, British Columbia**

The Landlord and the Tenant hereby agree to amend the **Lease** clause In Clause 6 of the Offer as follows:

"6. LEASE

The Lease shall be in the form of the existing Lease, allowing for reasonable amendments thereto as requested by the Landlord and Tenant. The Landlord's proposed final form of Lease, Including the terms and conditions of this Offer and all agreed amendments thereto shall be delivered by the Landlord to the Tenant on or before 2:00 p.m. (Vancouver Time) on November 28, 2011. The Lease shall be **mutually agreed by both parties and executed by both parties on or before December 6, 2011 at 5:00 p.m. (Vancouver Time)**."

ALL OTHER TERMS AND CONDITIONS TO REMAIN IN FULL FORCE AND EFFECT.

AGREED and ACCEPTED this **29th day of November, 2011**.

/s/ (illegible)

Concert Realty Services Ltd., on behalf of Concert Real Estate Corporation

AGREED and ACCEPTED this **29th day of November, 2011**.

/s/ Karen G. Corraini

Xenon Pharmaceuticals Inc.
KAREN G. CORRAINI
GENERAL COUNSEL & CORPORATE SECRETARY

LEASE EXTENSION AND MODIFICATION AGREEMENT

This Agreement made effective the **27th day of October, 2011**.

BETWEEN:

CONCERT REAL ESTATE CORPORATION

(the "**Landlord**")

AND:

XENON PHARMACEUTICALS INC.

(the "**Tenant**")

WHEREAS:

A. By, a lease made in 2001 (the "**Original Lease**") between Discovery Parks Incorporated (the "**Original Landlord**") and Xenon Genetics Inc.,(the "**Original Tenant**"), the Original Tenant leased certain premises (the "**Original Premises**") comprising the whole of the building (the "**Building**") located on property known as 3650 Gilmore Way, Burnaby, British Columbia, as more particularly described in the Original Lease for a term of ten (10) years expiring on April 14, 2011;

B. The Landlord is the successor in interest to the Original Landlord;

C. The Tenant successor in interest to ti.i0 OriginalTeri

D. By a lease extension and modification agreement made effective November 8, 2010 (the "**First Modification**") between the Landlord and Tenant, the Landlord and the Tenant agreed to extend the term of the Original Lease for an additional four (4) months and sixteen (16) days, for a term expiring on August 31, 2011, as further described in the First Modification.

E. By a lease extension and modification agreement made effective February 7, 2011 (the "**Second Modification**") between the Landlord and Tenant, the Landlord and the Tenant agreed to extend the term of the Original Lease for an additional four (4) months, for a term expiring on December 31, 2011, as further described in the Second Modification.

F. By a lease extension and modification agreement made effective June 1, 2011 (the "**Third Modification**") between the Landlord and Tenant, the Landlord and Tenant agreed to extend the term of the Original Lease for an additional three (3) months, for a term expiring on March 31, 2012, as further described in the Third Modication (the Original Lease as modified by the First Modification, the Second Mddification and the Third Modification is referred to herein as the: "**Lease**");

G. By an Offer to Lease (the "**Original Offer**") accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010, the Landlord and Tenant agreed that the Tenant would continue to lease a portion (the "**Proposed New Premises**", being the whole of the lst and 2nd floors of the Building) of the Original Premises, as more particularly described in the Offer, for a term of 120 months commencing on September 1, 2011, on the terms and conditions set out in the Origin Offer;

H. By an Addendum/Amendment (the "**First Addendum**") dated for reference February 7, 2011, the Original Offer was amended as set out therein;

I. By an Addendum/Amendment (the "**Second Addendum**") dated for reference June 1, 2011, the Original Offer, as amended, was further amended as set out therein;

J. By an Addendum/Amendment (the "**Third Addendum**") dated for reference August 31, 2011, the Original Offer, as amended, was farther amended as set out therein, including adding a right for the Tenant to elect to surrender and terminate its rights under the Original Offer in respect of that portion (the "**Surrender Area**") of the Proposed New Premises shown on the plan attached to the Third Addendum as Exhibit A;

K. By an Addendum/Amendment (the "**Fourth Addendum**") dated for reference September 30, 2011, the Original Offer, as amended, was further amended by replacing the plan of the Surrender Area attached to the Third Addendum as Exhibit A with the plan attached as Exhibit A to the fOurth Addendum;

L By a letter (the "**Surrender Letter**") dated September 30, 2011, the Tenant notified the Landlord that the Tenant was exercising its right to surrender and terminate its rights under the Original Offer in respect of the Surrender Area;

M. The Original Offer, as emended by the First Addendum, Second Addendum, Third Addendum, Fourth AddendUrn and Sufrender Letter, is herein referred to as the "**Offer**" and the proposed New Premises, excluding the Surrender Area are referred to as the "**Premises**");

N. The Landlord and the tenant acknowledge and agree that the recitals hereto are true and incontrovertible;

O. The Landlord and the Tenant have agreed to amend the Lease to incorporate the terms of the Offer on the terms set out herein.

THEREFORE in consideration of the premises, the mutual covenants and agreements contained herein and other good and valuable Consideration, the receipt and sufficiency of which is hereby acknowledged by each of the parties hereto, the parties agree as follows:

1. The Landlord and Tenant hereby agree to extend the term of the Lease for a further term (the "**Extension Term**") of ten (10) years commencing on April 1, 2012 (the "**Extension Term Commencement Date**") and terminating on March 31, 2022 on and subject to the terms of the Lease except as amended herein.

2. As of the Extension Term Commencement Date, the Lease is amended as follows:

   (a) In section 1.1, the phrase "Rentable Area of approximately 56,776 square feet, being the entire Building situated thereon, as set out in Schedule "A" attached hereto" is deleted and replaced With "Rentable Area of approximately 34,000 square feet, subject to confirmation pursuant to section 3.3 below, being a portion of the first floor and the entire second floor of the Building situated thereon, as set out in Schedule "A" attached hereto. The Rentable Area shall further be adjusted to reflect the Tenant's Proportionate Share of Common Areas as per section 3.3 below.

(b) In section 2.1:

(i) the phrase “of ten (10) years” is deleted in its entirety; and

(ii) the phrase “expiring on the day immediately prior to the tenth anniversary of the Commencement Date” is deleted and replaced with “expiring on March 31, 2022”;

(c) section 3.1 of the Lease is amended as follows:

(i) The address of the Landlord is deleted and replaced with “9th Floor, 1190 Hornby Street, Vancouver, BC V6Z 2K5”;

(ii) The following is added at the bottom of the table set out therein:

“Period	Per Square Foot	Approximate Basic Rent Per Annum	Approximate Basic Rent Per Month
April 15, 2011 - March 31, 2012	$ 19.50	$1,107,132.00	$ 92,261.00
April 1, 2012 - March 31, 2017	$ 19.50	$ 663,000.00	$ 55,250.00
April 1, 2017 - March 31, 2022	$ 21.00	$ 714,000.00	$ 59,500.00

The Tenant shall have a Free Basic Rent Period from April 1, 2012 through to August 15, 2012. During this period, the Tenant shall pay to the Landlord its Proportionate Share of Operating Expenses and property taxes and abide by all other terms of the Lease.”;

(d) section 3.2 is deleted and replaced with the following:

*The Tenant has paid to the Landlord the sum of Eighty Nine Thousand Nine Hundred and Sixty Four Dollars ($89,964.00) as a deposit. The deposit shall be held by the Landlord, without liability for interest, as security for any and all present and future debts and liabilities of the Tenant to the Landlord in connection with its obligations (the “Obligations”) arising under this Lease for the term of the Lease. In the event the Landlord shall from time to time apply any or all of such deposit towards payment of the Obligations, the Tenant shall, from time to time at the request of the Landlord, forthwith pay to the Landlord the sum required to return the deposit to its original amount. If the Landlord disposes of its interest in this Lease, the Landlord shall credit the deposit to its successor and thereupon shall have no liability to the Tenant to repay the deposit to the Tenant. If the Tenant shall from time to time fail to perform its Obligations, the Landlord may apply all or part, as the case may be, of the deposit to rectify such failure. Subject to the foregoing, the Landlord shall repay the deposit to the Tenant 30 days after the end of the Term or sooner termination of the Lease, provided that all Obligations of the Tenant are paid and performed in full, failing which the Landlord may, on notice to the Tenant, elect to retain the deposit and to apply it in reduction of the Obligations and the Tenant shall remain fully liable to the Landlord for payment and performance of the remaining Obligations.”

(e) section 3.3 is amended as follows:

(i) by adding the following at the beginning:

"The Actual Rentable Area of the Premises shall be measured in accordance with the BOMA Standard."; and

(ii) by adding the following paragraph after the first paragraph of section 3.3:

"The Rent shall be $19.50 per square foot per year from April 1, 2012 to March 31, 2017 (excepting the Free Basic Rent Period from April 1, 2012 to August 15, 2012) and $21.00 per square foot per annum for the period from April 1, 2017 to March 31, 2022."

(f) section 3.4 is amended by deleting the phrase "or the Offer to Lease";

(g) section 3.7 is deleted in its entirety and replaced with "Intentionally deleted";

(h) section 4.1 is amended by deleting the phrase "and for related business activities all in accordance with the zoning by-laws of the City of Burnaby" and replacing it with the phrase ", for related business activities and for the operation of a vivarium and any other use permitted under the applicable zoning by-laws for the Building";

(i) section 5.1(a) is amended by adding the following at the end:

"Additional Rent is estimated at seven dollars and thirty-five cents ($7.35) per square foot of Rentable Area for the fiscal year of the Building ending September 30, 2010.";

(j) section 5.1(j) is deleted in its entirety and replaced with "Common Areas" means, without duplication, (1) those areas of the Land not intended by the Landlord for lease by tenants and (2) those areas of the Building that are Common Areas in accordance with the definition of "Common Areas" set out in the BOMA Standard:";

(k) section 5.1(s) is deleted in its entirety and replaced with "Leasehold Improvements" means all fixtures, trade fixtures, improvements, installations, alterations, and additions from time to time made, erected, or installed by, or on behalf of, the Tenant in the Premises, with the exception of furniture and equipment not of the nature of fixtures";

(l) section 5.1(v) is deleted in its entirety and replaced with "intentionally deleted";

(m) section 6.9 is amended by adding the following at the end:

"Notwithstanding the foregoing, the Tenant shall be granted non-exclusive signage on the Building, subject to the terms and conditions in the Lease, all existing signage shall remain in place during the Term and any extension thereof.";

(n) section 16.4 is deleted in its entirety and replaced with "intentionally deleted";

(o) section 6.15 is deleted in its entirety and replaced with “intentionally deleted”;

(p) section 6.20(a) is amended by deleting the figure “$2,000,000.00” and replacing it with “$5,000,000.00”;

(q) Article 27 is deleted in its entirely and replaced with “intentionally deleted”;

(r) in Section 28.1:

(i) the phrase “and Offer to Lease” in line 2 is deleted; and

(ii) the last sentence is deleted in its entirety;

(s) Section 29.1(b) and Articles 30, 31 and 32 are each deleted in their entirety and replaced with “intentionally deleted”;

(t) new Articles 33, 34, 35, 36 and 37 are added as follows:

“33.0 FIRST OPPORTUNITY TO LEASE

33.1 Provided, that the Tenant has not been in material breach of the Lease, the Tenant shall have the first opportunity, to lease any space becoming available for lease on the third (3rd) floor of the Building at any time during the Term that is not encumbered by another lease. The Basic Rent payable on the said space shall be the current fair market rental as agreed to by the parties and failing such agreement, as determined by arbitration by a single arbitrator pursuant to the *Commercial Arbitration Act* of British Columbia. The cost of the arbitrator will be shared equally between the parties. The Tenant shall have the right to assign this First Opportunity to Lease to a permitted assignee under this Lease concurrently with the assignment by the Tenant to such assignee of all of the Tenant’s rights under this Lease.

34.0 OPTION TO RENEW

34.1 Provided the Tenant has not been in breach of the Lease, the Tenant shall have the right to extend the Term of the Lease with respect to the Premises and any additional space leased by the Tenant for an additional two (2) consecutive terms of five (5) years each on the same terms and conditions as contained in the Lease, save only the Basic Rent, any free rent, landlord’s work, tenant allowances, or other tenant inducements and this option to renew. To exercise this right, the Tenant shall give written notice to the Landlord no earlier than twelve (12) months and no later than nine (9) months prior to the expiry of the Term or the expiry of the immediately preceding extension period (as the case may be); and if such notice is not given, this option to extend shall be deemed waived and of no further effect and any additional extension periods will be null and void. The Basic Rent payable during each such extension period shall be the fair market rent for the premises and any additional space leased by the Tenant, taking into account the inducements being offered in the Market and excluding the value of any improvements that have been constructed or installed at the expense of the Tenant. In any event, the Basic Rent per annum shall not be less than the Basic Rent payable in the last year of the expiring term. In the event that Landlord and Tenant are unable to reach agreement on the Basic Rent, the

Basic Rent shall be determined by arbitration by a single arbitrator pursuant to the Commercial Arbitration Act of British Columbia. The cost of the arbitrator will be shared equally between the parties.

35.0 RIGHT OF TERMINATION

35.1 Provided that the Tenant has not been in material breach of the Lease, the Tenant shall have the right to surrender the Lease on or at any time after March 31, 2015 (the "**Right to Terminate**") by providing a minimum of twelve (12) months prior written notice to the Landlord and, upon providing written notice to cancel the Lease, paying a surrender "fee calculated as the unamortized portion of the contribution paid by the Landlord to the Tenant in relation to the extension of the Term for the period from April 1, 2012 to March 31, 2022, being Twenty-five Dollars ($25.00) per square foot of Rentable Area of the Premises (the "**Allowance**"), the unamortized portion of real estate commissions paid by the landlord, and two (2) months' **Rent**; plus applicable taxes. For the purpose of this calculation, the Allowance and commission shall be amortized over the period from April 1, 2012 to March 31, 2022 at an effective interest rate of 7% per annum, compounded semi-annually.

36.0 PARKING

36.1 The Tenant shall be provided surface and underground parking stalls based on its proportionate share and in common with other tenants in the Building (if any) on a first-come, first-served basis (random stalls), free of any monthly parking charge for the balance of the Term from April 1, 2012 and any renewals thereof. The Tenant may designate underground parking spaces allocated to it for use as storage areas or other uses and may fence these off or construct demising walls, subject to the Landlord's approval and compliance with building codes, and subject to not impeding access to the balance of the parking stalls. The Tenant covenants that all fencing or demised walls for such storage areas shall be removed at the Tenant's sole cost and expense prior to the Lease expiry and all damages caused by such removal shall be repaired by the Tenant at is sole cost and expense.

37.0 RESTORATION

37 1 The Tenant shall not be responsible for any costs associated with converting the main floor lobby or other portions of the Building for multi-tenant purposes. Upon expiry of the term; or any permitted renewal/cancellation thereof, the Tenant shall, subject to Section 8.4 only be responsible for removing any Leasehold Improvements or Tenant's Work located in the Portion of its Premises within the first (1st) and second (2nd) floor, and to a maximum amount of $800,000 plus applicable taxes."; and

(u) Existing Articles 33.0 and 34.0 are renumbered Articles 38.0 and 39.0, respectively.

(v) Schedule A is deleted and replaced with Schedule "A" attached hereto.

3. For greater clarity, after the First Measurement, Rent will be adjusted, and calculated retroactive to the Extension Term Commencement Date, and after the Second Measurement, Rent will be adjusted

and calculated retroactive, to the date of the Landlord's commencement of its work on the Surrender Area to create an entrance lobby and an elevator lobby to convert the Building to a multi-tenant building (the "Building Conversion Work"). The Actual Rentable Area of the. **Proposed New Premises** shall be measured in accordance with the BOMA Standard within thirty (30) days of the Extension Term Commencement Date (the "First Measurement"). The Actual Rentable Area of the Premises shall further be measured, in, accordance with the BOMA Standard within thirty (30) days, after completion by the Landlord, of the Building Conversion Work (the "Second Measurement"). All such BOMA surveys shall be done at the Landlord's cost.

(4) The Premises shall be accepted, by the Tenant on an "as is" basis with the exception of the Landlord's Work outlined on Schedule "B" attached hereto. The Landlord's Work shall be completed by the Landlord at mutually accepted date(s) and time(s) between the Landlord and the Tenant and to the Building standard. Prior to commencing any of the Landlord's Work, Landlord will provide the Tenant with plans of its intended improvement work (consisting of applicable electrical, mechanical and architectural drawings, specifications and other appropriate information) for review and approval by the Tenant, acting reasonably. The Tenant acknowledges and agrees that if Landlord's Work is required, some of this Landlord's Work may have to be done after the Tenant vacates the third (3rd) floor of the Building.

The Tenant acknowledges and agrees that during such time when the Landlord, or its appointed contractors, subcontractors, or employees is/are conducting the Landlord's Work in the Building, the Tenant will be in the Premises in common with the Landlord, its contractors, subcontractors, or employees. The Landlord will make reasonable efforts to ensure that the operation of the Tenant's business is not disrupted during the Landlord's work period, however, the Tenant acknowledges and agrees that during the Landlord's Work period, there will be disruptions throughout the Tenant's business hours (or after business hours), and the Tenant shall make its best commercial efforts to cooperate with the Landlord, its appointed contractors, sub-contractors, or employees during the Landlord's Work period to ensure that the Landlord's Work proceeds efficiently.

The Landlord shall arrange and be financially responsible for all installation costs for separate metering of all utilities supplied to the Tenant pursuant to the Lease. This may be by way of a sub-meter and include third-party monitoring which shall form part of the tenant's Operating Expenses payable under the Lease.

5. The Landlord will pay to the Tenant, as a contribution towards the cost of the Tenant's Leasehold Improvements to that portion of the Premises that comprises the Rentable Area as of the Extension Term Commencement Date (the "**Tenant's Work**"), the Allowance, plus applicable taxes. This Allowance shall be payable upon the completion of the items listed hereto in Schedule "C", which shall be incorporated into the Landlord's standard Tenant Work Agreement attached hereto as Schedule "D". Should the Tenant's Work cost less than the Allowance, the difference will be applied on account of the Basic Rent and Operating Expenses and Property Taxed payments due under the Lease from April 1, 2012 to a maximum. of up to Ten Dollars ($10.00) per square foot of Rentable Area of the Premises, plus applicable taxes.

The Landlord and the Tenant further confirm and agree that, at the Tenant's discretion, the Landlord will pay the above-noted Allowance to the Tenant in two (2) separate installments, in such amounts and on such dates as may be requested by the Tenant. For the avoidance of doubt the Landlord and the Tenant further confirm and agree that any surrender fee payable under Article 35.0 of the lease, being the Right of Termination, shall be calculated only on the unamortized portion of the Allowance actually paid to the Tenant by the Landlord in addition to the unamortized portion of the real estate commissions and the two (2) month' **Rent**, as stated in Article 35.0 of the Lease.

6. The Landlord acknowledges and agrees that in the event the Landlord elects to require the Tenant to demolish improvements as set out in clause 8.4 of the Lease with respect to the third floor of the Building (such improvements which, for the avoidance of doubt, include Leasehold Improvements), the Tenant shall not be responsible for any costs associated with converting the third floor of the Building to multi-tenant use in compliance with building codes, including without limitation those costs associated with construction of corridors, demising walls, and the modifications to the Building's mechanical and electrical systems.

7. The parties confirm and ratify the terms and conditions contained in the Lease as amended by this Agreement.

8. This Agreement will, from the Effective Date, be read and construed together with the Lease, and the Lease, as amended hereby, shall continue in full force and effect for the remainder of the term of the Lease in accordance with the terms thereof and hereof.

9. This Agreement will enure to the benefit of and be binding upon the heirs, executors, administrators, successors and permitted assigns of the parties.

10. The Landlord covenants and agrees that it will apply to the City of Burnaby, at its sole expense, for all approvals required in connection with allowing that area located on the 3rd floor of the Building currently housing the Tenant's existing server room, as shown on Schedule "E" attached hereto (the "**Server Room Area**") to remain as part of the Tenant's leased Premises after the Landlord demises the third (3rd) floor of the Building, and that it will use reasonable commercial efforts to obtain such approvals from the City of Burnaby on or before January 31, 2012. Provided that all required approvals are received from the City of Burnaby by the Extension Term Commencement Date, the Landlord agrees to lease to the Tenant, commencing on the Extension Term Commencement Date, the Server Room Area, on the same terms and conditions as the Lease, as amended by this Agreement. If the Server Room Area is leased, by the Landlord to the Tenant, the definition of "Proposed New Premises" and "Premises" in this Agreement will be amended to include the Server Room Area, and the table in section 3.1 of the Lease, as amended, setting out the Basic Rent per annum and per month, will be updated accordingly. The Landlord covenants and agrees that if it leases the Server Room Area to the Tenant, the Tenant will be entitled to access the Server Room Area at all times.

IN WITNESS WHEREOF the parties have executed this Agreement as of the date first above written.

CONCERT REAL ESTATE CORPORATION

By: /s/ (illegible)
Authorized Signatory

By: /s/ (illegible)
Authorized Signatory

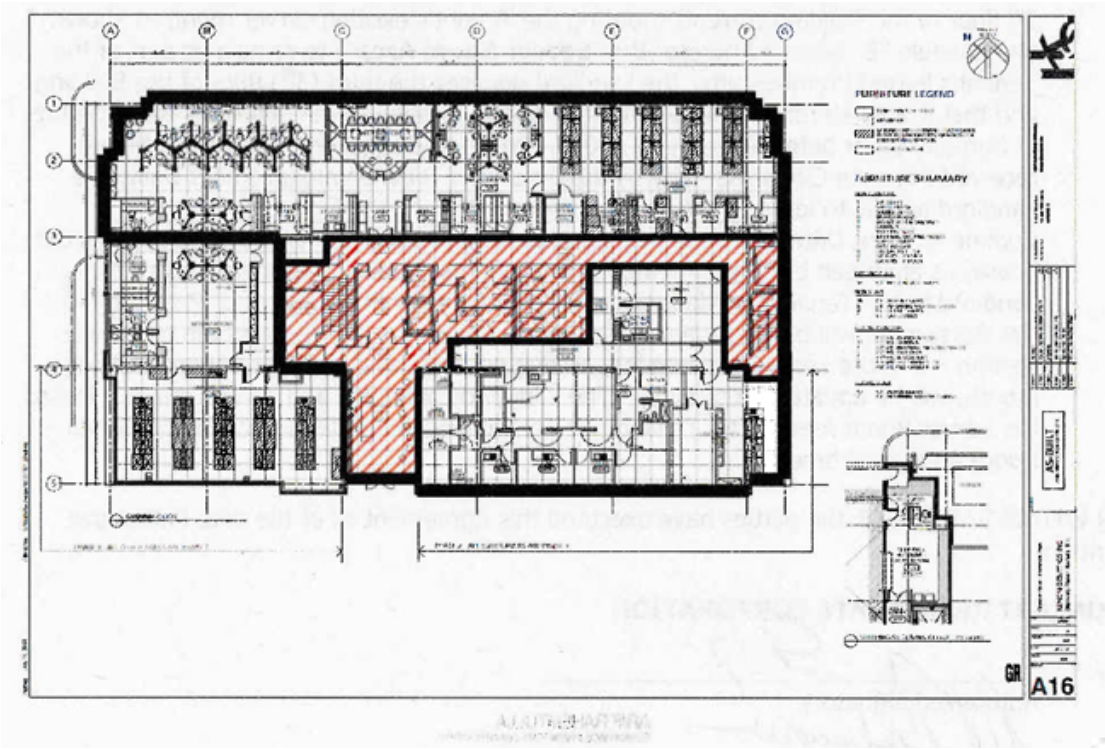
XENON PHARMACEUTICALS INC.

By: /s/ Simon Pimstone
Authorized Signatory

By: _____
Authorized Signatory

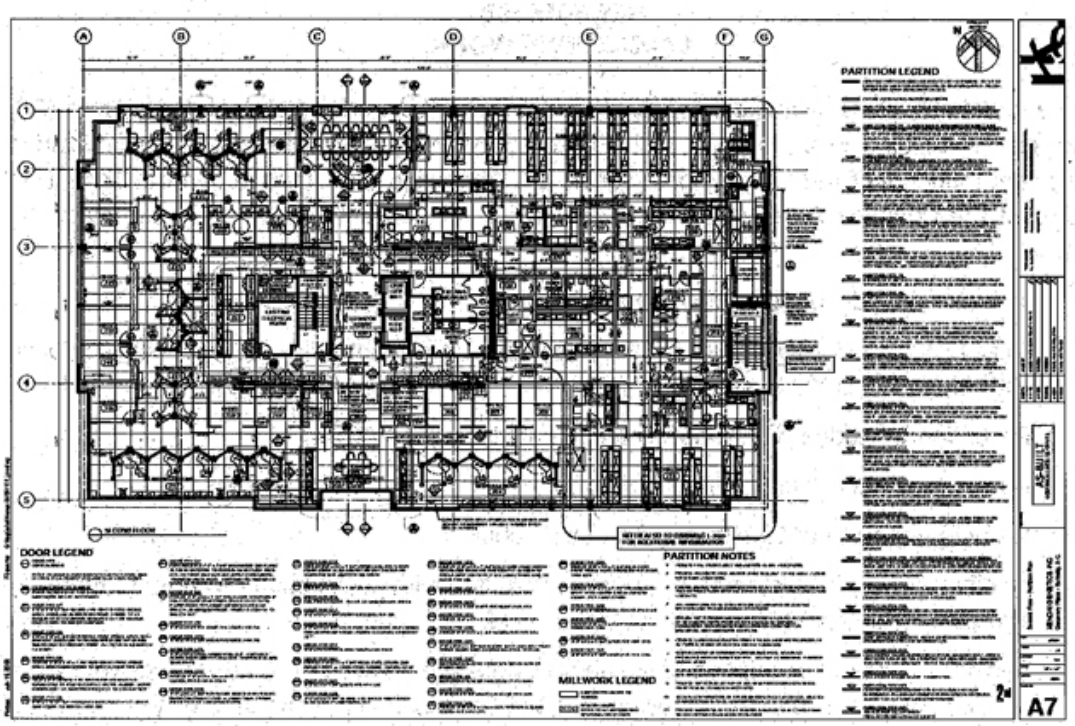
SCHEDULE A
PLAN

1st Floor outlined in heavy black - Includes future Common Areas



** The area hatched in red above indicates the approximate location of the Common Areas.**

2nd Floor - Tenant is leasing entire 2nd Floor



SCHEDULE B
LANDLORD'S WORK

The Landlord will, at its own expense, complete the following work on the Main and Third (3rd) floors of the Building in accordance with Section 3 of the Lease Extension and Modification Agreement made as of the 27th day of October, 2011 between the Landlord and the Tenant, in respect of the Common Area of the Building, and, to the extent that they are affected, the Premises:

(a) Where required, construct demising walls;

(b) Install double full height glass entrance doors plus full height solid core exit doors complete with magnetic card access system tied into the Building security system;

(c) Reconfigure heating, ventilation and air-conditioning (HVAC);

(d) Reconfigure automatic sprinkler system;

(e) Reconfigure elevator lobbies and entrance lobbies;

(f) Modify the security system to provide the Premises with autonomous security to mutually agreeable standards between the Landlord and the Tenant;

(g) Replace any cracked, chipped or stained ceiling acoustic tiles or drywall ceilings with new or like new matching acoustic ceiling tiles and finishes (in common area only);

(h) Where required by building code, the Landlord shall be responsible for seismic upgrades to base building T-bar ceiling, lighting systems and base Building mechanical systems.

The Tenant acknowledges and agrees that during such time when the Landlord, or its appointed contractors, sub-contractors, or employees is/are conducting the Landlord's Work in the Building, the Tenant will be in the Premises or the Additional Area in common with the Landlord, its contractors, sub-contractors, or employees. The Landlord will make reasonable efforts to ensure that the operation of the Tenant's business is not disrupted during the Landlord's Work period; however, the Tenant acknowledges and agrees that during the Landlord's Work period, there will be disruptions throughout the Tenant's Normal Business Hours (or after Normal Business Hours) and the Tenant shall make its best commercial efforts to co-operate with the Landlord, its appointed contractors, sub-contractors, or employees during the Landlord's Work period to ensure that the Landlord's Work proceeds efficiently.

SCHEDULE C
TENANT'S WORK

The Landlord agrees to pay to the Tenant an Allowance payable within ten (10) days after the completion of all of the following:

(a) execution and delivery of the Lease Extension and Modification Agreement made as of the 27th day of October, 2011 between the Landlord and the Tenant (the "**Lease Amending Agreement**") by the Tenant to the Landlord as well as full compliance by the Tenant with all Tenant obligations of the Lease;

(b) the Extension Term Commencement Date has passed;

(c) receipt of notice from the Tenant that it has completed the Tenant's Work contemplated in the Lease Amending Agreement;

(d) the applicable statutory lien holdback period shall have expired and any liens that may have been filed against the Premises or the property with respect to the work done by or on behalf of the Tenant with respect to the Premises shall have been discharged from title tithe property; and

(e) receipt by the Landlord of:

(i) a copy of the Tenant's final inspection permit for the Tenant's Work within the Premises and a copy of the Tenant's business license, if required;

(ii) an officer's certificate or a statutory declaration by a principal of the Tenant of payment in full of all costs relating to the Tenant's Work;

(iii) copies of receipted invoices for the Tenant's Work substantiating the amount that has been expended and paid Par by the Tenant;

(iv) a letter from the Workers' Compensation Board of B.C. ("WorkSafeBC") confirming that the Tenant and its general contractor have satisfied all assessment requirements of the WorkSafeBC to the date which is thirty days following the date of substantial completion of the Tenant's Work; and

(v) a copy of the certificate of completion signed by the payment certifier in respect of the Tenant's Work, or if a payment certifier is not available, a certificate of Substantial Completion from the Tenant's contractor.

SCHEDULE D
TENANT WORK AGREEMENT

i) Under the Lease made in 2001 'between Discovery Parks Incorporated and Xenon Genetics Inc., as assigned to Concert Real Estate Corporation (the "**Landlord**") and Xenon Pharmaceuticals, Inc (the "**Tenant**"), and as amended, including a Lease Extension and Modification Agreement made as of the 27th day of October, 2011 between the Landlord and the Tenant (the "**Lease Amending Agreement**") (collectively, the "**Lease**"), the Landlord agreed to pay to the Tenant an allowance (the "**Allowance**") in the amount and on the terms more particularly set out in the Lease;

ii) The parties have entered into this Agreement to supplement their agreement with respect to the Allowance on the terms set out herein.

NOW THEREFORE in consideration of the respective covenants made by the parties in the Lease and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged the parties agree as follows:

ARTICLE 1
APPLICATION ALLOWANCE

1.01 The Tenant covenants and agrees with the Landlord that the Tenant shall utilize the Allowance to complete certain improvements to the Premises (as defined and more particularly set out in the Lease) to prepare them for use and occupation by the Tenant.

ARTICLE 2
REQUIREMENTS FOR TENANT'S WORK

2.01 The Tenant shall accept the Premises in "as is, where is" condition, excepting only the work, if any, specifically set out in the Lease to be completed by the Landlord. It is the Tenant's responsibility to ensure that the Premises are finished in a good and, professional manner and with new materials that are of a high quality and conforming to the industry standards of practice and are not in contravention of the codes or regulations of the appropriate municipal authority or any other authority having jurisdiction.

2.02 Prior to commencing any work in the Premises, the Tenant will provide the Landlord with detailed plans of its intended improvement work (consisting of applicable electrical, mechanical and architectural drawings, specifications and other appropriate information) for review and approval by the Landlord, acting reasonably. The Tenant will be responsible for all costs incurred by the Landlord in reviewing and approving such plans, including consultant fees. The Tenant may use the Landlord's consultant with respect to the Tenant's work.

2.03 The Tenant, at its expense, will revise its plans to address issues or required changes identified by the Landlord, acting reasonably, and resubmit the revised plans for final approval of the Landlord, acting reasonably. The Landlord's approval of the Tenant's plans denotes acceptance of the information contained in the drawings and specifications provided and approval of the visual design that the drawings appear to represent. The Landlord's approval does not mean confirmation of dimensions shown on the drawings nor does it limit the responsibilities of the Tenant to those shown on the drawings and specifications. The Tenant will be responsible for all work required to prepare the Premises for their intended and permitted use under the Lease and sigh criteria, codes, regulations and laws of governing authorities having jurisdiction, whether or not this is completely shown on the Tenant's drawings, notwithstanding the Landlord's approval. The landlord is not responsible for the function and performance of the Tenant's design, installation and construction.

2.04 It is the Tenants responsibility to obtain all necessary approvals and permits for its work from the appropriate municipal authority and all other authorities having jurisdiction and the Tenant must submit evidence of these approvals to the Landlord before commencing work. The Tenant is responsible for payment of all fees and charges incurred in obtaining said approvals and for obtaining, if required by the Municipality, an occupancy permit prior to commencing operations in the Premises.

2.05 Before commencing the Tenant's work, the Tenant is to provide written proof to the Landlord that liability, fire, general worker's compensation and any other insurance reasonably required by the Landlord has been effected and is in force to the limits and on the terms which the Landlord may reasonably approve. The Landlord shall be named at an additional insured and loss-payee in the Tenant's insurance for the Premises.

2.06 The Tenant indemnifies the Landlord from any and all claims arising out of work done by the Tenant or its contractors and the Tenant will promptly remove any liens filed against title to the Premises or the Land (as defined in the Lease) in connection therewith, failing which the Landlord may do so and the Tenant will pay all the Landlord's costs, including legal costs, as incurred by the Landlord.

2.07 The Landlord is not responsible or liable for any materials left or installed in the Premises or for any loss or damage suffered by the Tenant, its contractor or subcontractors. The Tenant is entirely responsible for the security of the Premises and the security of its contractor's supplies and equipment. No security for the Premises will be installed unless prior written approval is obtained from the Landlord.

2.08 The Tenant acknowledges, and agrees that:

(a) the Landlord is not in any way responsible or liable with regard to any Tenant's Work (as defined in the Lease) carried out in the Premises;

(b) any damage caused by the Tenant, its contractor or subcontractors employed on the Tenant's Work to any work of the structure or the systems employed in the Building or to any property of the Landlord or of other tenants or owners in the Building is to be repaired by the Landlord's contractor to the satisfaction of the Landlord and the Landlord may recover the costs incurred from the Tenant; and

(c) under no circumstances shall the Tenant or its contractor at any time be permitted to drill or cut conduit, pipe sleeves, chases, duct equipment, openings in the floor, columns, walls or ceiling of the Building; any work of this type required by the Tenant Shall be subject to the Landlord's approval, pot to be, unreasonably withheld or delayed.

ARTICLE 3
WORK DONE BY THE LANDLORD FOR THE TENANT

3.01 Any equipment or work (excepting any Landlord's Work, as defined in the Lease) provided by the Landlord for or at the request of the Tenant, is to be paid for by the Tenant as follows:

(a) one hundred percent (100%) of the amount payable will be paid at the time the Tenant requests the equipment to be supplied or the work to be done; and

(b) the cost of such equipment or work includes, without limitation, labour, materials, applicable taxes, all architectural, engineering and contractor's fees in connection thereof, and all reasonable fees for supervision of such work as the Landlord may charge.

ARTICLE 4
ALLOWANCE

4.01 The Landlord agrees to pay to the Tenant the Allowance payable within ten (10) days after the completion of all of the following:

(a) execution and delivery of the Lease Amending Agreement by the Tenant to the Landlord as well as full compliance by the Tenant with all Tenant obligations of the Lease;

(b) the Extension Term Commencement Date has passed;

(c) receipt of notice from the Tenant that it has completed the Tenant's Work contemplated in the Lease Amending Agreement;

(d) the applicable statutory lien holdback period shall have expired and any liens that may have been filed against the Premises or the property with respect to the work done by or on behalf, of the Tenant with respect to the Premises shall have been discharged from title to the property; and

(e) receipt by the Landlord of:

(i) a copy of the Tenant's final Inspection Permit for the Tenant's Work within the Premises and a copy of the Tenant's business license, if required;

(ii) an officer's certificate or a statutory declaration by a principal of the Tenant of payment in full of all costs relating to the Tenant's Work;

(iii) copies of receipted invoices for the Tenant's Work substantiating the amount that has been expended and paid for by the Tenant;

(iv) a letter from the Workers' Compensation Board of B.C. ("WorkSafeBC") confirming that the Tenant and its general contractor have satisfied all assessment requirements of the WorkSafeBC to the date which is thirty (30) days following the date of substantial completion of the Tenant's Work; and

(v) a copy of the certificate of completion signed by the payment certifier in respect of the Tenant's Work, or if a payment certifier is not available, certificate of Substantial Completion from the Tenant's contractor.

ARTICLE 5
NON-COMPLIANCE

5.01 If the Tenant does not comply with the provisions of the Lease or any other agreement relative to the construction or occupation of the Premises, including this Agreement, the Landlord, in addition to and not in lieu of any other rights or remedies, has the right to any and all of the following in its discretion:

(a) to declare all fees, charges and other sums payable by the Tenant to the Landlord pursuant to this Agreement to be rent and to be collectible as rent under the provisions of the Lease; or

(b) to declare and treat the Tenant's non-compliance as a default or breach of Covenant under the Lease and exercise any right available under the provisions of the Lease, including the right of termination.

5.02 In any event of termination pursuant to the above provisions, the Landlord may further elect either to retain for its own use and without payment of, all or any of the Tenant's Work which has been commenced, installed or completed to the date of termination or immediately demolish or remove all or any work and restore the Premises to the condition it was prior to the commencement of the Tenant's Work, the cost which is payable by the Tenant.

ARTICLE 6
GENERAL

6.01 This Schedule shall survive, and neither shall merge upon, the execution and delivery of the other such document. The parties acknowledge and agree that the terms of this Agreement are intended to supplement and co-exist with the terms of the Lease, notwithstanding any contrary term of the Lease.

IN WITNESS WHEREOF the parties have executed this Agreement as of the date set out above.

The Landlord:

CONCERT REAL ESTATE CORPORATION

Per

/s/ (illegible)
(Authorized Signatory)

Per

/s/ (illegible)
(Authorized Signatory)

The Tenant:

XENON PHARMACEUTICALS INC.

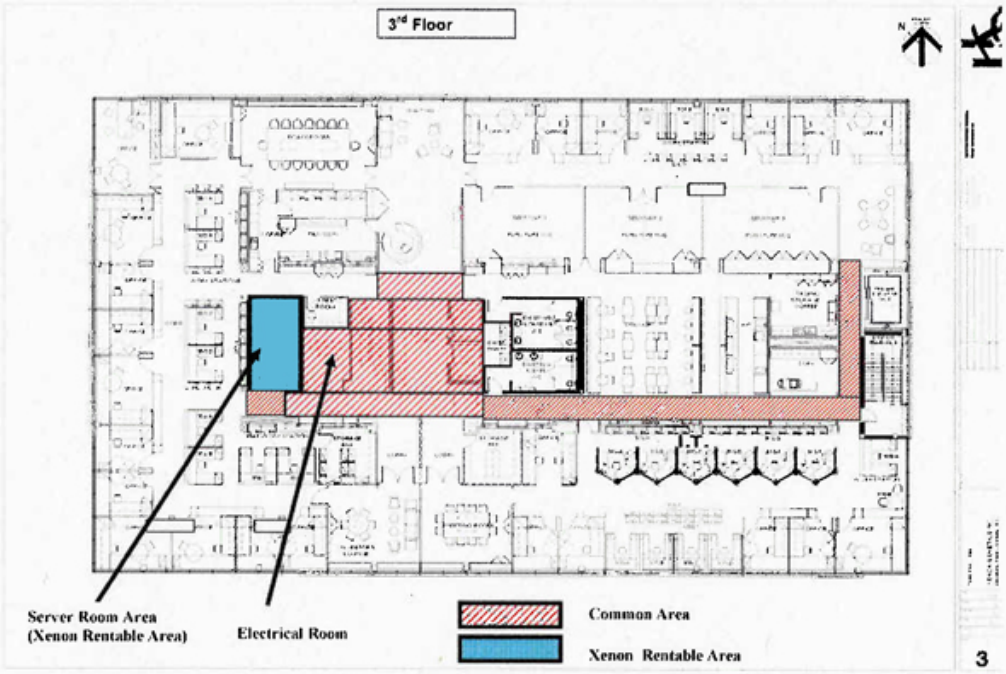
Per

/s/ Simon Pimstone
(Authorized Signatory)

Per

(Authorized Signatory)

SCHEDULE E
SERVER ROOM AREA



** The area hatched in red above indicates the approximate location of the Common Areas.**

LEASE MODIFICATION AGREEMENT

This Agreement made on the **18th day of July, 2013** and made effective as of the **1st day of April**, **2012** (the "Effective Date").

BETWEEN:

CONCERT REAL ESTATE CORPORATION

(the "**Landlord**")

AND:

XENON PHARMACEUTICALS INC.

(the "**Tenant**")

WHEREAS:

A. By a lease made in 2001 (the "**Original Lease**") between Discovery Parks Incorporated (the "**Original Landlord**") and Xenon Genetics Inc. (the "**Original Tenant**"), the Original Tenant leased certain premises (the "**Original Premises**") comprising the whole of the building (the "**Building**") located on property known as 3650 Gilmore Way, Burnaby, British Columbia, as more particularly described in the Original Lease for a term of ten (10) years expiring on April 14, 2011;

B. The Landlord is the successor in interest to the Original Landlord;

C. The Tenant is the successor in interest to the Original Tenant;

D. By a lease extension and modification agreement made effective November 8, 2010 (the "**First Modification**") between the Landlord and Tenant, the Landlord and the Tenant agreed to extend the term of the Original Lease for an additional four (4) months and sixteen (16) days, for a term expiring on August 31, 2011, as further described in the First Modification;

E. By a lease extension and modification agreement made effective February 7, 2011 (the "**Second Modification**") between the Landlord and Tenant, the Landlord and the Tenant agreed to extend the term of the Original Lease for an additional four (4) months, for a term expiring on December 31, 2011, as further described in the Second Modification;

F. By a lease extension and modification agreement made effective June 1, 2011 (the "**Third Modification**") between the Landlord and Tenant, the Landlord and the Tenant agreed to extend the term of the Original Lease for an additional three (3) months, for a term expiring on March 31, 2012, as further described in the Third Modification;

G. By an Offer to Lease (the "**Original Offer**") accepted by the Landlord on November 9, 2010 and accepted by the Tenant on November 23, 2010, the Landlord and Tenant agreed that the Tenant would continue to lease a portion (the "**Proposed New Premises**", being the whole of the 1st and 2nd floors of the Building) of the Original Premises, as more particularly described in the Offer, for a term of 120 months commencing on September 1, 2011, on the terms and conditions set out in the Original Offer;

H. By an Addendum/Amendment (the "**First Addendum**") dated for reference February 7, 2011, the Original Offer was amended as set out therein;

I. By an Addendum/Amendment (the "**Second Addendum**") dated for reference June 1, 2011, the Original Offer, as amended, was further amended as set out therein;

J. By an Addendum/Amendment (the "**Third Addendum**") dated for reference August 31, 2011, the Original Offer, as amended, was further amended as set out therein, including adding a right for the Tenant to elect to surrender and terminate its rights under the Original Offer in respect of that portion (the "**Surrender Area**") of the Proposed New Premises shown on the plan attached to the Third Addendum as Exhibit A;

K. By an Addendum/Amendment (the "**Fourth Addendum**") dated for reference September 30, 2011, the Original Offer, as amended, was further amended by replacing the plan of the Surrender Area attached to the Third Addendum as Exhibit A with the plan attached as Exhibit A to the Fourth Addendum;

L. By a letter (the "**Surrender Letter**") dated September 30, 2011, the Tenant notified the Landlord that the Tenant was exercising its right to surrender and terminate its rights under the Original Offer in respect of the Surrender Area;

M. The Original Offer, as amended by the First Addendum, Second Addendum, Third Addendum, Fourth Addendum, the Surrender Letter, Addendum #5 dated October 19, 2011, Addendum #6 dated October 28, 2011, Addendum #7 dated November 9, 2011, Addendum #8 dated November 25, 2011, and Addendum #9 dated November 29, 2011, and the , is herein referred to as the "**Offer**" and the Proposed New Premises, excluding the Surrender Area but Including the IT Room (as defined below) are referred to as the "**Premises**";

N. By a lease extension and modification agreement made as of October 27, 2011 (the "**Fourth Modification**") between the Landlord and Tenant, the Landlord and the Tenant agreed to extend the term of the Original Lease for an additional ten (10) years, for a term expiring on March 31, 2022 on the terms and conditions therein, as further described in the Fourth Modification (the Original Lease as modified by the First Modification, the Second Modification, the Third Modification and the Fourth Modification is referred to herein as the "**Lease**");

O. The Landlord and the Tenant acknowledge and agree that the recitals hereto are true and incontrovertible;

P. The Landlord and the Tenant have agreed to amend the Lease on the terms set out herein.

THEREFORE in consideration of the premises, the mutual covenants and agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged by each of the parties hereto, the parties agree as follows:

1. For the purposes of this Agreement and unless there is a definition specifically herein contained, any words, terms or phrases that are defined in the Lease shall have the same meaning herein.

2. The Landlord and the Tenant acknowledge and agree that the Landlord has obtained the First Measurement for the Premises.

3. The Landlord and the Tenant further acknowledge and agree that the Landlord has obtained the Second Measurement, which illustrates the final Actual Rentable Area of the Premises.

4. Effective on the Effective Date, the Landlord and the Tenant agree that all rental payments in the Lease shall be adjusted in accordance with this Lease Modification Agreement.

5. The Landlord and the Tenant agree to delete Clause 2 (a) of the Fourth Modification and replace it with the following:

"(a) In section 1.1, the phrase "Rentable Area of approximately 56,776 square feet, being the entire Building situated thereon, as set out in Schedule "A" attached hereto" is deleted and replaced with "Rentable Area of **30,600** square feet, being **a portion of the first floor (Unit 120), the entire second floor (Unit 200) and a portion of the third floor ("IT Room" and "Unit 200")** of the Building situated thereon, as set out in Schedule "A" and Schedule "E" attached hereto, and includes the Tenant's Proportionate Share of Common Areas as per section 3.3 below. For avoidance of doubt, the areas designated as "Vertical Penetrations Areas" in Schedule "A" and Schedule "E" are not included in the "Second Measurement" calculation underlying the above-noted Rentable Area and the Basic Rent set forth in Section 3.1 below.";

6. The Landlord and the Tenant agree to delete Clause 2 (c) (ii) of the Fourth Modification and replace it with the following:

"Period	**Per Square Foot**	**Approximate Basic Rent Per Annum**	**Approximate Basic Rent Per Month**
April 15, 2011 - March 31, 2012	$ 19.50	$1,107,132.00	$ 92,261.00
April 1, 2012 - March 31, 2017	$ 19.50	**$ 596,700.00**	**$ 49,725.00**
April 1, 2017 - March 31, 2022	$ 19.50	**$ 642,600.00**	**$ 53,550.00**

The Tenant shall have a Free Basic Rent Period from April 1, 2012 through to August 15, 2012. During this period, the Tenant shall pay to the Landlord its Proportionate Share of Operating Expenses and property taxes and abide by all other terms of the Lease.";

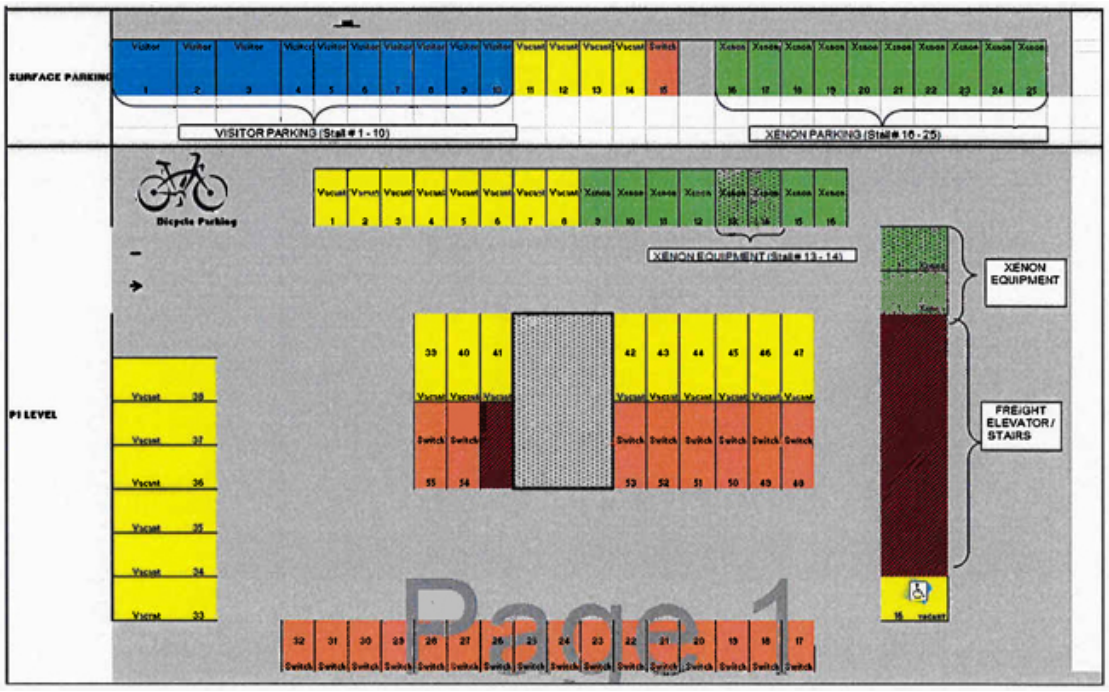
7. The Landlord and the Tenant agree to delete Article 36 of the Lease and replace it with the following:

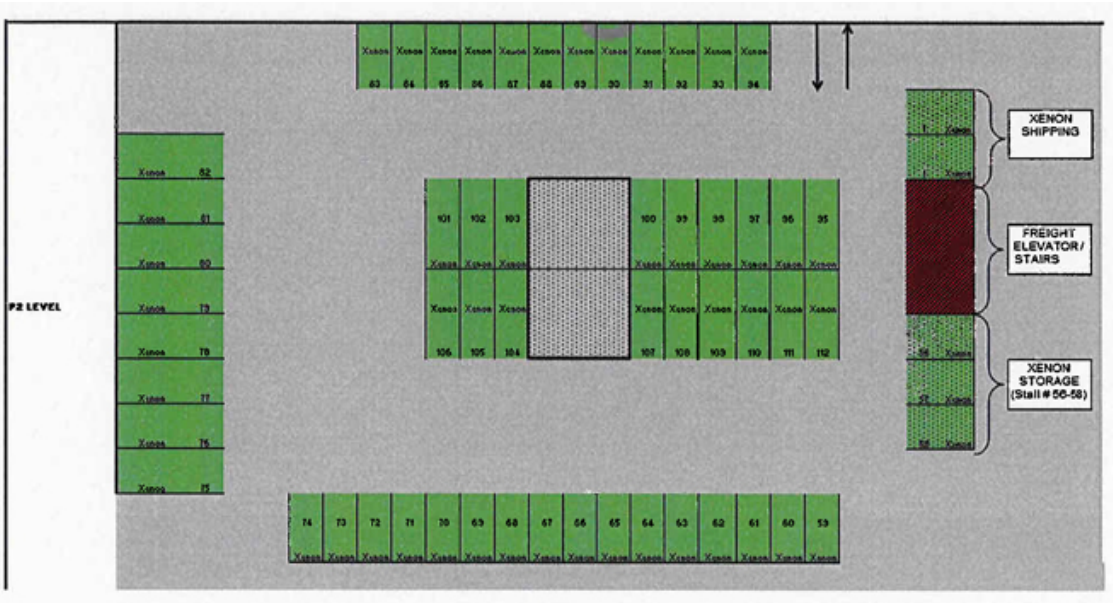
36.0 PARKING

36.1 The Tenant shall be provided **seventy (70) designed** parking stalls free of any monthly parking charge for the balance of the Term from April 1, 2012 and any renewals thereof **as shown on the parking plan below**. The Tenant may designate underground parking spaces allocated to it for use as storage areas or other uses and may fence these off or construct demising walls, subject to the

Landlord's approval (such approval not to be unreasonably withheld) and compliance with building codes, and subject to not impeding access to the balance of the parking stalls. The Tenant covenants that all fencing or demised walls for such storage areas shall be removed at the Tenant's sole cost and expense prior to the Lease expiry and all damages caused by such removal shall be repaired by the Tenant at its sole cost and expense.

Parking Plan





8. The Landlord and the Tenant agree that Schedule "A" of the Lease is deleted and replaced with Schedule "A" attached hereto.

9. The Landlord and the Tenant hereby confirm that the **Landlord's Work** in Schedule "B" of the **Fourth Modification** has been completed and satisfied.

10. The Landlord and the Tenant hereby confirm that, as of the date of this Agreement, pursuant to the Tenant Work Agreement attached as Schedule "D" of the Fourth Modification, the Tenant has conducted certain Tenant's Leasehold Improvements comprising Tenant's Work under the Lease ("**2012/2013 Leasehold Improvements**"). For avoidance of doubt, in keeping with the Landlord and the Tenant's mutual intention and understanding as set out under the first sentence of paragraph 2 of Section 5 of the Fourth Modification, and notwithstanding anything to the contrary in Section 5 of the Fourth Modification or otherwise, the Landlord and the Tenant further confirm their agreement as follows:

    (a) with respect to the 2012/2013 Leasehold Improvements, the Tenant has complied with Sections 2.01 to 2.05 (inclusive), and subsection 2.08(c) of the Tenant Work Agreement; **however, the Landlord and the Tenant agree and accept that the following items for the 2012/2013 Leasehold Improvements shall be submitted from the Tenant to the Landlord as a condition of the Allowance being paid**:

        (i) "As built" drawings saved in PDF and AutoCAD format 2004 and submitted to the Landlord on a CD or via e-mail;

        (ii) Mechanical drawings;

        (iii) All Permits; and

        (iv) All inspection reports;

    (b) at the Tenant's discretion, as of the date of this Agreement, (subject to the Tenant having complied with the requirements of the Tenant Work Agreement, and specifically, having provided to the Landlord those items set forth under subsections 4.01 (c), (d), and (e) of such Tenant Work Agreement) the Tenant has the right to request that the Landlord pay to the Tenant (as the first installment contemplated under the first sentence of paragraph 2 of Section 5 of the Fourth Modification) up to the total of the amount of the Allowance that relates to the 2012/2013 Leasehold Improvements, and in the event the Tenant requests same, such first installment portion of the Allowance will be paid to the Tenant within ten (10) days of the Tenant's request for same;

(c) should the Tenant desire to delay its request for such first installment payment, until such later time and time that it has conducted additional Tenant's Leasehold Improvements comprising Tenant's Work, the Tenant has the right to do so, and at that time (provided that such additional Tenant's Leasehold Improvements (as well as the 2012/2013 Leasehold Improvements) are completed and satisfied in accordance with the terms set out in the Lease including those terms set out in the Tenant Work Agreement), the applicable first installment portion of the Allowance (relating to all such Tenant's Work conducted and completed as of that later date), will be paid to the Tenant within ten (10) days of the Tenant's request for same;

(d) the Tenant has the right to request that the Landlord pay to the Tenant the second installment payment, at any time over the course of the Extension Term following the date of the Tenant's request for its first installment payment, and in the event the Tenant requests such second installment payment, (provided that any Tenant's Leasehold Improvements that are the subject matter of that second installment payment are completed and satisfied in accordance with the terms set out in the Lease including those terms set out in the Tenant Work Agreement), such second installment portion of the Allowance will be paid to the Tenant within ten (10) days of the Tenant's request for same; and

(e) in the event that, the total amount of the Tenant's Work (as repaid by the Landlord to the Tenant under the first installment plus the second installment) is a sum lower than the total amount of the Allowance, the difference between the Allowance and the amount actually repaid to the Tenant by the Landlord, calculated in accordance with paragraph 1 of Section 5 of the Fourth Modification (the "**Difference**"), will be applied on account of the Basic Rent and Operating Expenses and Property Taxes otherwise owed to the Landlord by the Tenant. For the avoidance of doubt, if at the time that the Landlord and Tenant make the determination that the Difference is payable to the Tenant, the Extension Term has been completed and there is no more Basic Rent, Operating Expenses, or Property Taxes otherwise owed to the Landlord by the Tenant to which the Difference could be applied, in such event the Landlord will forthwith pay the Difference to the Tenant in cash.

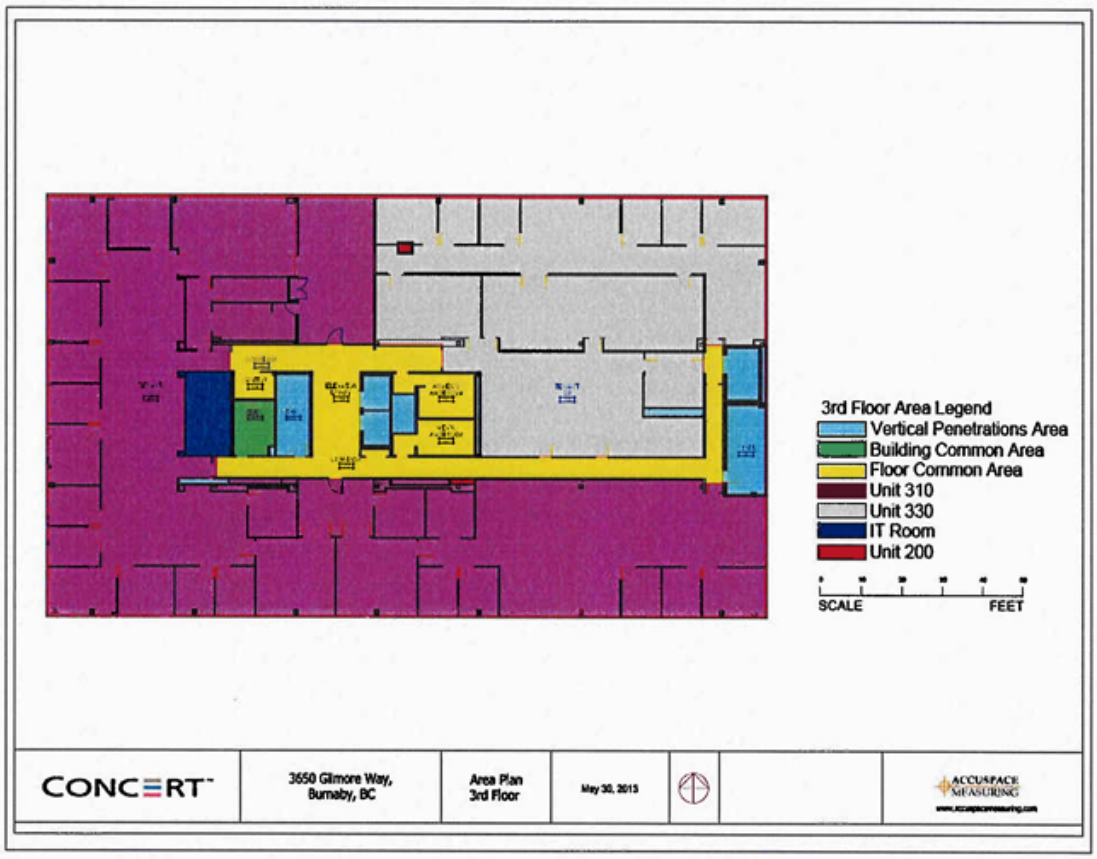
11. The parties confirm and ratify the terms and conditions contained in the Lease as amended by this Agreement.

12. This Agreement will, from the Effective Date, be read and construed together with the Lease, and the Lease, as amended hereby, shall continue in full force and effect for the remainder of the term of the Lease in accordance with the terms thereof and hereof.

13. This Agreement will enure to the benefit of and be binding upon the heirs, executors, administrators, successors and permitted assigns of the parties.

14. The Landlord and the Tenant agree to delete Schedule "E" of the Fourth Modification and replace it with the following:

SCHEDULE "E"
SERVER ROOM AREA (LABELED "IT ROOM")



IN WITNESS WHEREOF the parties have executed this Agreement as of the date first above written.

CONCERT REAL ESTATE CORPORATION

By: /s/ (illegible)
Authorized Signatory

By: /s/ (illegible)
Authorized Signatory

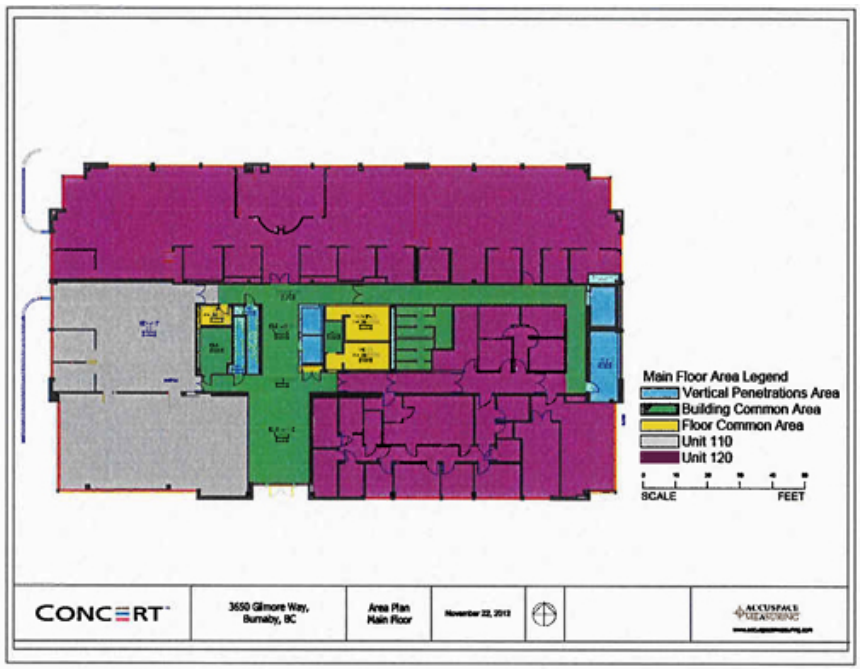
XENON PHARMACEUTICALS INC.

By: /s/ Simon Pimstone
Authorized Signatory

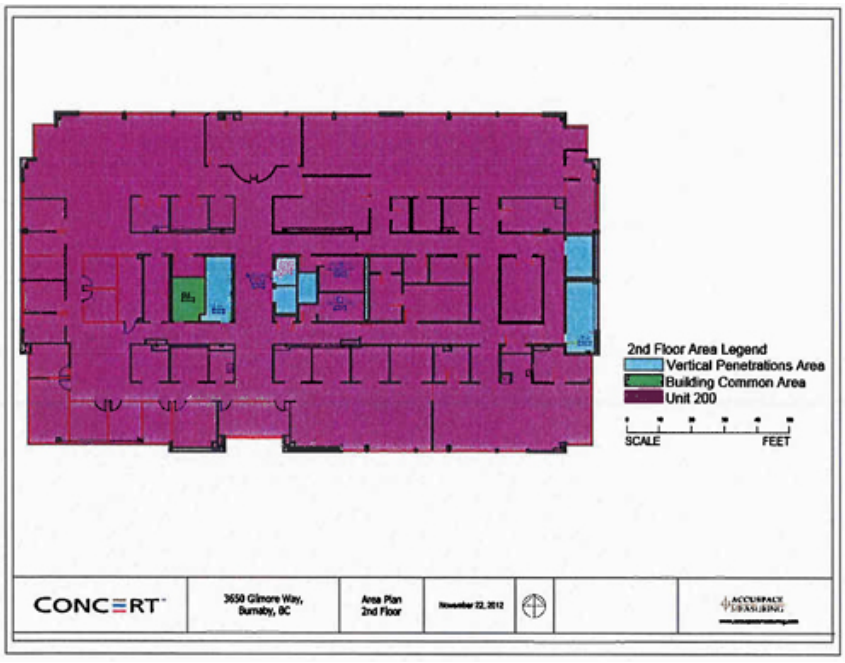
By: _____
Authorized Signatory

SCHEDULE "A"
PLAN

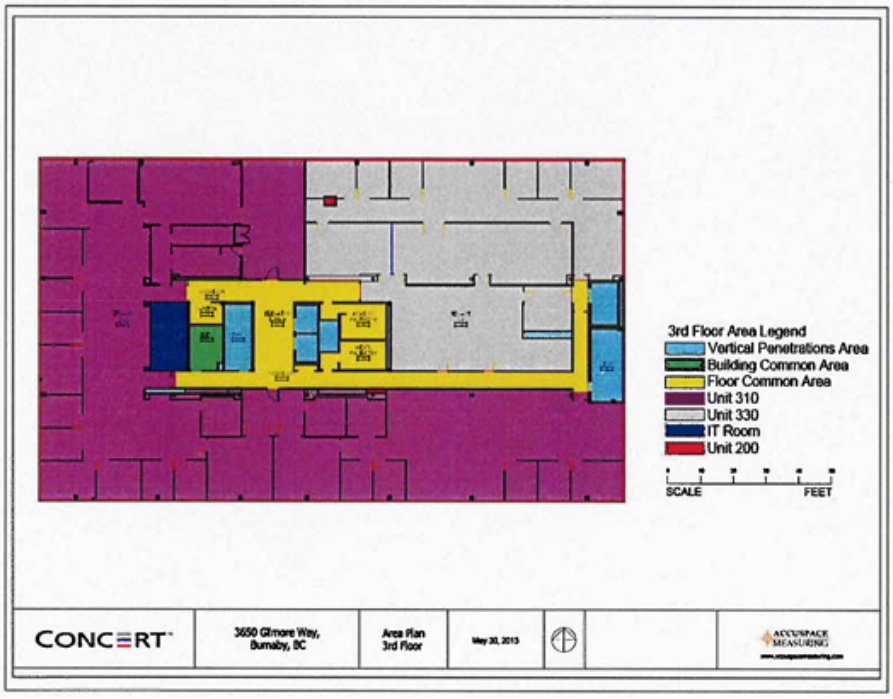
1st Floor — Unit 120



2nd Floor — Tenant is leading entire 2nd Floor



3rd Floor — Unit 200



END OF DOCUMENT

Exhibit 21.1

LIST OF SUBSIDIARIES OF
XENON PHARMACEUTICALS INC.

The Company has no subsidiaries.