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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): May 8, 2018

XENON PHARMACEUTICALS INC.

(Exact name of Registrant as Specified in Its Charter)

Canada	**001-36687**	**98-0661854**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**
200-3650 Gilmore Way Burnaby, British Columbia, Canada		**V5G 4W8**
(Address of Principal Executive Offices)		**(Zip Code)**

Registrant's Telephone Number, Including Area Code: (604) 484-3300

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instructions A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§ 230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§ 240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Item 2.02 Results of Operations and Financial Condition

On May 8, 2018, Xenon Pharmaceuticals Inc. (the "Company") announced via press release the Company's financial results for the three month period ended March 31, 2018. A copy of the Company's press release is attached hereto as Exhibit 99.1. The information in this Form 8-K and the attached exhibit are furnished to, but not filed with, the Securities and Exchange Commission.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits.

Pursuant to the rules and regulations of the Securities and Exchange Commission, the attached exhibit is deemed to have been furnished to, but not filed with, the Securities and Exchange Commission:

Exhibit Number	**Description**
99.1	Press Release issued by Xenon Pharmaceuticals Inc. dated May 8, 2018.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Xenon Pharmaceuticals Inc.

Date: May 8, 2018

By: /s/ *Ian Mortimer*

Ian Mortimer
President & Chief Financial Officer

XENON

NEWS RELEASE

Xenon Pharmaceuticals Reports First Quarter 2018 Financial Results and Provides Corporate Update

Xenon's novel clinical stage epilepsy candidates, XEN1101 and XEN901, to be presented at upcoming 14th Eilat Conference on New Antiepileptic Drugs and Devices on May 15, 2018

BURNABY, British Columbia, May 8, 2018 -- Xenon Pharmaceuticals Inc. (Nasdaq:XENE), a clinical stage biopharmaceutical company, today reported its financial results for the quarter ended March 31, 2018 and provided a corporate update.

Dr. Simon Pimstone, Xenon's Chief Executive Officer, said, "Xenon is approaching an exciting and pivotal juncture within our clinical epilepsy programs. We are presenting interim Phase 1 data from our ongoing XEN1101 clinical trial at the 14th EILAT Conference in Madrid, Spain on May 15, 2018. Our presentation will include a preliminary pharmacodynamic read-out from the completed Phase 1a transcranial magnetic stimulation (TMS) study. We are also providing an update on our XEN901 epilepsy program in a second podium presentation."

Dr. Pimstone added, "We have now locked the XEN1101 clinical database in order to analyze preliminary Phase 1 results from 42 healthy volunteers. We are looking forward to presenting these interim XEN1101 data; not only will we have a better understanding of the safety, tolerability and pharmacokinetics of XEN1101, but positive TMS findings could provide early validation of target engagement and activity on cortical excitability and help guide our planning for the next stages of clinical development. These interim data will also allow for a comparison between XEN1101 and a first generation potassium channel opener, ezogabine, which was approved for the adjunctive treatment of adult focal seizures. Looking forward, we expect to be able to present the complete XEN1101 Phase 1 data, including results from the Phase 1b randomized TMS study in the second half of the year, and, anticipate initiating a Phase 2 clinical trial in adult patients with focal seizures by year end."

Dr. Pimstone continued, "Additionally, we remain on track to present the complete XEN901 Phase 1 data in the second half of this year and initiate a Phase 2 clinical trial thereafter. These significant milestones underscore the substantial amount of progress we have made within our proprietary and highly differentiated epilepsy programs and contribute to our excitement around the near-term catalysts still to come this year."

Achievements and Anticipated Milestones

- XEN1101 is a Kv7 potassium channel opener being developed by Xenon for the treatment of epilepsy including: treatment-resistant adult and pediatric focal seizures; rare, pediatric forms of epilepsy, such as EIEE7, an early infantile epileptic encephalopathy associated with mutations in the KCNQ2 gene that cause loss-of-function in the Kv7.2 potassium channel; and potentially other neurological disorders.

  The XEN1101 Phase 1 clinical trial currently underway is evaluating the safety, tolerability and pharmacokinetics of both single ascending doses (SAD) and multiple ascending doses (MAD) of XEN1101 in healthy subjects, and includes a pharmacodynamic read-out from a transcranial magnetic stimulation (TMS) study that is designed to assess XEN1101's ability and potency to modulate cortical excitability, an important CNS effect observed with anti-epileptic drugs. Xenon has completed a Phase 1a pilot TMS study in 8 healthy subjects and has now begun a double-blind, placebo-controlled, randomized cross-over Phase 1b TMS study, which is expected to include approximately 15 healthy subjects.

  Xenon is presenting interim Phase 1 results – including preliminary pharmacokinetic, tolerability and safety data from 42 subjects, along with a read-out from the 8 subject Phase 1a pilot TMS study – at the 14th EILAT Conference on New Antiepileptic Drugs and Devices to be held in Madrid, Spain on May 15, 2018. The release of the complete Phase 1 results, including the Phase 1b TMS data from approximately 15 subjects, is anticipated in the second half of 2018. Xenon anticipates initiating a Phase 2 clinical trial evaluating XEN1101 as a treatment for adult focal seizures by year end. Xenon also intends to explore a parallel plan to advance XEN1101 into rare, pediatric forms of epilepsy as soon as feasible thereafter.

- XEN901 is a potent, highly selective Nav1.6 sodium channel inhibitor being developed by Xenon for the treatment of epilepsy including treatment resistant adult and pediatric focal seizures, as well as rare, pediatric forms of epilepsy, such as EIEE13, an early infantile epileptic encephalopathy due to gain-of-function mutations in the SCN8A gene that encodes the Nav1.6 sodium channel.

The XEN901 Phase 1 clinical trial currently underway is a randomized, double-blind, placebo-controlled study designed to evaluate XEN901's safety, tolerability and pharmacokinetics in both SAD and MAD cohorts of approximately 64 healthy subjects in total. An update on the XEN901 clinical program, along with supporting pre-clinical data, will be presented at the EILAT Conference on May 15, 2018. Upon completion of the Phase 1 clinical trial, a read-out of results is anticipated in the second half of 2018, followed by a Phase 2 trial evaluating XEN901 as a treatment for adult focal seizures. Xenon also intends to pursue a parallel plan to advance XEN901 into rare, pediatric forms of epilepsy as soon as feasible thereafter.

- Xenon has identified an additional clinical stage, ion channel program, XEN007 (active ingredient flunarizine), to expand its existing neurology-focused product pipeline. XEN007 is a CNS-acting calcium channel inhibitor that directly modulates Cav2.1, which is a critical calcium channel implicated in the pathophysiology of familial hemiplegic migraine (HM), a rare and debilitating neurological disorder. Xenon's clinical development plans include a proposed strategy to develop XEN007 as the first treatment specifically approved for HM anywhere in the world. Xenon has received Orphan Drug Designation from the U.S. Food and Drug Administration (FDA) for XEN007 for the treatment of HM. In addition, Xenon has entered into key agreements in order to access regulatory files and manufacturing support to potentially enable the accelerated clinical development of XEN007 directly into a Phase 2 clinical trial. Xenon is currently examining various development strategies for XEN007 with key opinion leaders and leading clinicians, as well as exploring options for potential partnerships for this program.

- Xenon has an ongoing collaboration with Genentech, a member of the Roche Group, which is focused on developing novel inhibitors of Nav1.7 for the treatment of pain. Genentech has completed a Phase 1 clinical trial for GDC-0310, which is an oral, selective Nav1.7 small-molecule inhibitor developed for the potential treatment of pain. Guidance around the future clinical development of GDC-0310 will be updated once ongoing pre-clinical studies are completed and the final results are analyzed by Genentech.

First Quarter 2018 Financial Results

Cash and cash equivalents and marketable securities as of March 31, 2018 were $35.1 million, compared to $43.7 million as of December 31, 2017. There were 14,171,301 common shares and 2,868,000 Series 1 Preferred Shares, which Series 1 Preferred Shares are convertible into common shares on a one-for-one basis at the option of the holder, subject to certain limitations, outstanding as of March 31, 2018. Based on current assumptions, which include fully supporting the planned clinical development of XEN1101 and XEN901, Xenon anticipates having sufficient cash to fund operations into mid-2019, excluding any revenue generated from existing partnerships or potential new partnering arrangements.

Research and development expenses for the quarter ended March 31, 2018 were $5.6 million, compared to $5.9 million for the same period in 2017. The decrease of $0.3 million was primarily attributable to decreased spending on XEN801, a product candidate that is no longer being developed, and a decrease in pre-clinical, discovery and other internal program expenses. This decrease was partially offset by increased spending on XEN1101, which was acquired in April 2017, XEN901 and pre-clinical and discovery expenses supporting our Nav1.6 program.

General and administrative expenses for the quarter ended March 31, 2018 were $2.2 million and did not change significantly as compared to $2.1 million for the same period in 2017.

Other income for the quarter ended March 31, 2018 was $4.1 million, compared to $0.5 million for the same period in 2017. The increase was primarily driven by a one-time gain of $4.4 million on the termination of the collaboration agreement with Teva Pharmaceuticals International GmbH, along with Teva Canada Limited (collectively, "Teva") resulting from the cancellation of 1,000,000 common shares of Xenon that were owned by Teva, partially offset by a change in unrealized foreign exchange gains and losses arising from the translation of Canadian denominated balances to U.S. dollars.

Net loss for the quarter ended March 31, 2018 was $3.8 million, compared to $7.5 million for the same period in 2017, due primarily to the increase in other income.

Xenon also announced today that it has entered into an at-the-market equity offering sales agreement with Stifel, Nicolaus & Company, Incorporated, under which Xenon may sell its common shares, from time-to-time, for up to $30.0 million in aggregate sales proceeds in "at the market" transactions.

Conference Call Information

Xenon will host a conference call and live audio webcast today at 4:30 p.m. Eastern Time (1:30 p.m. Pacific Time) to discuss its first quarter 2018 financial results and to provide a business update. To participate in the call, please dial (855) 779-9075, or (631) 485-4866 for international callers, and provide conference ID number 4982979. The webcast will be broadcast live on the “Investors” section of Xenon's website at www.xenon-pharma.com and will be available for replay following the call for 30 days.

About Xenon Pharmaceuticals Inc.

We are a clinical stage biopharmaceutical company focused on developing innovative therapeutics to improve the lives of patients with neurological disorders. Building upon our extensive knowledge of human genetics and diseases caused by mutations in ion channels, known as channelopathies, we are advancing – both independently and with our collaborators – a novel product pipeline of central nervous system, or CNS, therapies to address areas of high unmet medical need, such as epilepsy, migraine and pain. For more information, please visit www.xenon-pharma.com.

Safe Harbor Statement

This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995 and Canadian securities laws. These forward-looking statements are not based on historical fact, and include statements regarding our expectations regarding the sufficiency of our cash to fund operations into mid-2019, the timing of and results from clinical trials and pre-clinical development activities, including those related to XEN901, XEN1101 and our other product candidates, the plans of our collaboration partners, the potential efficacy, safety profile, future development plans, addressable market, regulatory success and commercial potential of XEN901, XEN1101 and our other product candidates, the anticipated timing of IND, or IND equivalent, submissions and the initiation of future clinical trials for XEN901, XEN1101 and our other product candidates, the efficacy of our clinical trial designs, our ability to successfully develop and achieve milestones in the XEN901, XEN1101 and other development programs, the potential to advance XEN007 directly into a Phase 2 clinical trial, the anticipated benefits of the unique mechanisms of action of XEN901 and XEN1101, the design of our clinical trials and anticipated enrollment, and the progress and potential of our other ongoing development programs. These forward-looking statements are based on current assumptions that involve risks, uncertainties and other factors that may cause the actual results, events or developments to be materially different from those expressed or implied by such forward-looking statements. These risks and uncertainties, many of which are beyond our control, include, but are not limited to: clinical trials may not demonstrate safety and efficacy of any of our or our collaborators' product candidates; our assumptions regarding our planned expenditures and sufficiency of our cash to fund operations may be incorrect; our efforts to expand our current pipeline may not be successful; any of our or our collaborators' product candidates may fail in development, may not receive required regulatory approvals, or may be delayed to a point where they are not commercially viable; we may not achieve additional milestones in our proprietary or partnered programs; regulatory agencies may not permit XEN007 to advance directly into a Phase 2 clinical trial; the impact of competition; the impact of expanded product development and clinical activities on operating expenses; adverse conditions in the general domestic and global economic markets; as well as the other risks identified in our filings with the Securities and Exchange Commission and the securities commissions in British Columbia, Alberta and Ontario. These forward-looking statements speak only as of the date hereof and we assume no obligation to update these forward-looking statements, and readers are cautioned not to place undue reliance on such forward-looking statements.

XENON PHARMACEUTICALS INC.
Condensed Consolidated Balance Sheets
(Expressed in thousands of U.S. dollars)

	March 31, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents and marketable securities	$ 35,078	$ 43,667
Other current assets	1,583	1,154
Other assets	1,101	1,300
Total assets	$ 37,762	$ 46,121
Liabilities		
Current liabilities:		
Accounts payable and accrued expenses	2,388	3,383
Loan payable, current portion	1,400	700
Loan payable, long-term	5,476	6,104
Total liabilities	$ 9,264	$ 10,187
Shareholders' equity	$ 28,498	$ 35,934
Total liabilities and shareholders' equity	$ 37,762	$ 46,121

XENON PHARMACEUTICALS INC.
Condensed Consolidated Statements of Operations
(Expressed in thousands of U.S. dollars except share and per share amounts)

	Three Months Ended March 31,	
	2018	2017
Revenue:		
Collaboration revenue	$ —	$ 16
Operating expenses:		
Research and development	5,580	5,903
General and administrative	2,238	2,100
Total operating expenses	7,818	8,003
Loss from operations	(7,818)	(7,987)
Other income	4,063	470
Net loss	(3,755)	(7,517)
Net loss attributable to preferred shareholders	(33)	—
Net loss attributable to common shareholders	$ (3,722)	$ (15,752)
Net loss per common share:		
Basic	$ (0.21)	$ (0.42)
Diluted	$ (0.21)	$ (0.43)
Weighted-average common shares outstanding:		
Basic	17,804,421	17,946,209
Diluted	17,804,421	17,974,469

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