

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

**FORM S-8  
REGISTRATION STATEMENT**  
*UNDER*  
**THE SECURITIES ACT OF 1933**

**XENON PHARMACEUTICALS INC.**

(Exact name of registrant as specified in its charter)

**Canada**  
(State or other jurisdiction of  
incorporation or organization)

**98-0661854**  
(I.R.S. Employer  
Identification No.)

200 – 3650 Gilmore Way  
Burnaby, British Columbia V5G 4W8  
Canada  
(604) 484-3300  
(Address of principal executive offices, including zip code)

**2014 Equity Incentive Plan  
Amended and Restated Stock Option Plan**  
(Full title of the plan)

**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 and telephone number, including area code, of agent for service)

*Copies to:*

**Jeffrey D. Saper**  
**Steven V. Bernard**  
**Bryan D. King**  
Wilson Sonsini Goodrich & Rosati, P.C.  
650 Page Mill Road  
Palo Alto, California 94304  
(650) 493-9300

**Ian C. Mortimer**  
**Karen G. Corraini**  
Xenon Pharmaceuticals Inc.  
200 – 3650 Gilmore Way  
Burnaby, British Columbia V5G 4W8  
Canada  
(604) 484-3300

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 (Check one).

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 Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee

Common Shares, no par value per share, reserved for issuance pursuant to the 2014 Equity Incentive Plan	375,514 (2)	\$9.00 (5)	\$3,379,626.00	\$392.72
Common Shares, no par value per share, reserved for issuance pursuant to stock option awards outstanding under the 2014 Equity Incentive Plan	36,008 (3)	\$9.00 (6)	\$324,072.00	\$37.66
Common Shares, no par value per share, reserved for issuance pursuant to stock option awards outstanding under the Amended and Restated Stock Option Plan	1,350,882 (4)	\$4.22 (7)	\$5,700,722.04	\$662.43
<b>TOTAL:</b>			<b>\$9,404,420.04</b>	<b>\$1,092.81</b>

- (1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this Registration Statement shall also cover any additional common shares of the Registrant that become issuable under the 2014 Equity Incentive Plan (the "2014 Plan") and Amended and Restated Stock Option Plan (the "Stock Plan") by reason of any share dividend, share split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of the Registrant's outstanding common shares.
- (2) Represents 375,514 common shares reserved for issuance pursuant to future awards under the 2014 Plan as of the date of this Registration Statement.
- (3) Represents 36,008 common shares reserved for issuance pursuant to stock option awards outstanding under the 2014 Plan as of the date of this Registration Statement.
- (4) Represents 1,350,882 common shares reserved for issuance pursuant to stock option awards outstanding under the Stock Plan as of the date of this Registration Statement.
- (5) Estimated in accordance with Rule 457(h) solely for the purpose of calculating the registration fee on the basis of \$9.00, the initial public offering price set forth on the cover page of the Registrant's final prospectus, dated the date of this Registration Statement, relating to its initial public offering.
- (6) Estimated in accordance with Rule 457(h) solely for the purposes of calculating the registration fee on the basis of \$9.00, the exercise price per share of outstanding option awards under the 2014 Plan.
- (7) Estimated in accordance with Rule 457(h) solely for the purpose of calculating the registration fee on the basis of \$4.22, the weighted average exercise price per share of outstanding option awards under the Stock Plan (in U.S. dollars based on the noon exchange rate of 1.1320 Canadian dollars per U.S. dollar as quoted on November 3, 2014 by the Bank of Canada).

## PART I

### INFORMATION REQUIRED IN THE PROSPECTUS

The information specified in Item 1 and Item 2 of Part I of Form S-8 is omitted from this Registration Statement on Form S-8 (the "Registration Statement") in accordance with the provisions of Rule 428 under the Securities Act of 1933, as amended (the "Securities Act"), and the introductory note to Part I of Form S-8. The documents containing the information specified in Part I of Form S-8 will be delivered to the participants in the equity benefit plans covered by this Registration Statement as specified by Rule 428(b)(1) under the Securities Act.

## PART II

### INFORMATION REQUIRED IN REGISTRATION STATEMENT

#### Item 3. Incorporation of Documents by Reference.

Xenon Pharmaceuticals Inc. (the "Registrant") hereby incorporates by reference into this Registration Statement the following documents previously filed with the Securities and Exchange Commission (the "Commission"):

(1) The Registrant's Prospectus dated November 4, 2014, filed with the Commission pursuant to Rule 424(b) under the Securities Act, relating to the Registration Statement on Form S-1, as amended (File No. 333-198666), which contains the Registrant's audited financial statements for the latest fiscal year for which such statements have been filed; and

(2) The description of the Registrant's Common Shares contained in the Company's Registration Statement on Form 8-A (File No. 001-36687) filed with the Commission on October 10, 2014, pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including any amendment or report filed for the purpose of updating such description.

All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of filing of such documents; *provided, however*, that documents or information deemed to have been furnished and not filed in accordance with the rules of the Commission shall not be deemed incorporated by reference into this Registration Statement. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

#### Item 4. Description of Securities.

Not applicable.

#### Item 5. Interests of Named Experts and Counsel.

The validity of the common shares being registered pursuant to this Registration Statement will be passed upon for the Registrant by McCarthy Tétrault LLP, Vancouver, British Columbia. The partners and associates of McCarthy Tétrault LLP, as a group, own less than 1% of the Registrant's outstanding securities.

#### Item 6. Indemnification of Directors and Officers.

Under the Canada Business Corporations Act (the "CBCA"), the Registrant may indemnify its current or former directors or officers or any other individuals who act or have acted at its 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 the Registrant or the other entity. The CBCA

also provides that the Registrant 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 the Registrant 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 the Registrant's 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 the Registrant's 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.

The Registrant's by-laws require it to indemnify each of its directors, officers, former directors and officers and persons who act or acted at its request as a director or officer, or in a similar capacity, of a body corporate. The Registrant 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 or officer of the Registrant or such body corporate. The Registrant's by-laws also require it to, with the approval of a court, indemnify such individual referred to above, in respect of an action by or on behalf of it 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 the Registrant or such body corporate, against all costs, charges and expenses reasonably incurred by him in connection with such action. However, the Registrant shall not indemnify such individual if the individual did not act honestly and in good faith with a view to the Registrant's 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.

The Registrant's by-laws authorize it, with the approval of its board of directors, to purchase and maintain insurance for the benefit of each of its current or former directors or officers and each person who acts or acted at its request as a director or officer of another entity, against any liability incurred by him or her.

The Registrant has entered into indemnification agreements with each of its directors and certain officers. As provided by its by-laws, these agreements, among other things, require the Registrant 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 it, arising out of the person's services as a director or officer; provided that, the Registrant will not indemnify such individual if, among other things, he or she did not act honestly and in good faith with a view to its 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.

The Registrant expects to have an insurance policy in place shortly following the filing of this Registration Statement that covers its directors and certain officers, substantially in line with that purchased by similarly situated companies.

Insofar as indemnification of liabilities arising under the Securities Act may be permitted to members of the Registrant's board of directors, officers or persons controlling it pursuant to the foregoing provisions, the Registrant has been informed that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

See also the undertakings set out in response to Item 9 herein.

**Item 7. Exemption from Registration Claimed.**

Not applicable.

**Item 8. Exhibits.**

See Exhibit Index immediately following the Signature Pages.

## Item 9. Undertakings.

A. The undersigned Registrant hereby undertakes that:

- (1) It will file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
  - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
  - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
  - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement.

*Provided, however,* that paragraphs (A)(1)(i) and (A)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

- (2) For the purpose of determining any liability under the Securities Act, each such post-effective amendment 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.
- (3) It will remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

B. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement 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.

C. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act 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 and will be governed by the final adjudication of such issue.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Burnaby, British Columbia, Canada, on November 5, 2014.

### XENON PHARMACEUTICALS INC.

By: /S/ SIMON PIMSTONE

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, Ian Mortimer 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, as amended, 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 of 1933, this registration statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/S/ SIMON PIMSTONE</u> <b>Simon Pimstone</b>	President, Chief Executive Officer and Director (Principal Executive Officer)	November 5, 2014
<u>/S/ IAN MORTIMER</u> <b>Ian Mortimer</b>	Chief Financial Officer (Principal Financial and Accounting Officer)	November 5, 2014
<u>/S/ MICHAEL TARNOW</u> <b>Michael Tarnow</b>	Chair of the Board of Directors	November 5, 2014
<u>/S/ MOHAMMAD AZAB</u> <b>Mohammad Azab</b>	Director	November 5, 2014
<u>/S/ JOHNSTON EVANS</u> <b>Johnston Evans</b>	Director	November 5, 2014
<u>/S/ MICHAEL HAYDEN</u> <b>Michael Hayden</b>	Director	November 5, 2014
<u>/S/ FRANK HOLLER</u> <b>Frank Holler</b>	Director	November 5, 2014
<u>/S/ GARY PATOU</u> <b>Gary Patou</b>	Director	November 5, 2014
<u>/S/ EVAN STEIN</u> <b>Evan Stein</b>	Director	November 5, 2014

## INDEX TO EXHIBITS

<u>Exhibit Number</u>	<u>Description</u>	<u>Incorporated by Reference</u>			
		<u>Form</u>	<u>File No.</u>	<u>Exhibit</u>	<u>Filing Date</u>
4.1	Specimen common share certificate of the Registrant.	S-1/A	333-198666	4.1	10/6/2014
4.2	2014 Equity Incentive Plan, and form of option agreement thereunder.	S-1	333-198666	10.8	9/10/2014
4.3	Amended and Restated Stock Option Plan, and form of option agreement thereunder.	S-1/A	333-198666	10.7	10/6/2014
5.1	Opinion of McCarthy Tétrault LLP.				
23.1	Consent of KPMG LLP, Independent Registered Public Accounting Firm.				
23.2	Consent of McCarthy Tétrault LLP (contained in Exhibit 5.1 hereto).				
24.1	Power of Attorney (contained on the signature page hereto).				

McCarthy Tétrault LLP  
Suite 1300, 777 Dunsmuir Street  
P.O. Box 10424, Pacific Centre  
Vancouver BC V7Y 1K2  
Canada  
Tel: 604-643-7100  
Fax: 604-643-7900



November 5, 2014

Xenon Pharmaceuticals Inc.  
200 – 3650 Gilmore Way  
Burnaby, BC V5G 4W8  
Canada

Dear Sirs/Mesdames:

**Re: Registration Statement on Form S-8 of Xenon Pharmaceuticals Inc.**

We have acted as Canadian counsel to Xenon Pharmaceuticals Inc. (the “**Company**”), a corporation continued under the federal laws of Canada, in connection with the Registration Statement on Form S-8 (the “**Registration Statement**”) to be filed by the Company with the Securities and Exchange Commission (the “**SEC**”) relating to the registration under the Securities Act of 1933, as amended, of 1,762,404 common shares of the Company (the “**Shares**”), consisting of (i) 1,350,882 common shares of the Company, which are subject to currently outstanding stock options under the Company’s Amended and Restated Stock Option Plan, as amended; (ii) 36,008 common shares of the Company, which are subject to currently outstanding stock options under the Company’s 2014 Equity Incentive Plan; and (iii) 375,514 common shares of the Company to be issued under the Company’s 2014 Equity Incentive Plan (collectively, the “**Plans**”).

In connection with giving this opinion, we have examined the Registration Statement (including exhibits thereto). We have also examined originals, certified or otherwise identified to our satisfaction, of such public and corporate records, certificates, instruments and other documents as we have considered necessary in order to express the opinion set out below. With respect to the accuracy of factual matters material to this opinion, we have relied upon certificates or comparable documents and representations of public officials and of officers and representatives of the Company.

In giving this opinion, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity to original documents of all documents submitted to us as copies, certified or otherwise identified to our satisfaction. We have also considered such questions of law as we have deemed relevant and necessary as a basis for the opinion hereinafter expressed.

The opinion expressed herein is limited to matters governed by the laws of the Province of British Columbia and the laws of Canada applicable therein.

Based and relying upon and subject to the foregoing, we are of the opinion that the Shares, when issued and sold by the Company in accordance with the terms of the Plans and the agreements contemplated by the Plans, will be validly issued, fully paid and non-assessable shares in the capital of the Company.

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement and further consent to the use of our name wherever appearing in the Registration Statement.



This opinion is effective as at the date hereof and is based upon laws in effect and facts in existence as at the date hereof. We express no opinion as to the effect of future laws or judicial decisions on the subject matter hereof, nor do we undertake any duty to modify this opinion to reflect subsequent facts or developments concerning the Company or developments in the law occurring after the date hereof.

Yours very truly,  
/s/ McCarthy Tétrault LLP

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Board of Directors  
Xenon Pharmaceuticals Inc.

We consent to the use of our audit report dated February 19, 2014, except as to note 18(b) which is as of October 1, 2014, on the financial statements of Xenon Pharmaceuticals Inc., which comprise the balance sheets as at December 31, 2012 and December 31, 2013, the related statements of operations, comprehensive income (loss), changes in redeemable convertible preferred shares and shareholders' deficit and cash flows for each of the years in the three-year period ended December 31, 2013, incorporated herein by reference.

/s/ KPMG LLP  
Chartered Accountants

November 5, 2014  
Vancouver, Canada