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

**POST-EFFECTIVE AMENDMENT NO. 1 TO:
FORM S-8 REGISTRATION STATEMENT NO. 333-199860
FORM S-8 REGISTRATION STATEMENT NO. 333-202765
FORM S-8 REGISTRATION STATEMENT NO. 333-210050
FORM S-8 REGISTRATION STATEMENT NO. 333-216543
FORM S-8 REGISTRATION STATEMENT NO. 333-223497
FORM S-8 REGISTRATION STATEMENT NO. 333-230103
FORM S-8 REGISTRATION STATEMENT NO. 333-237036
FORM S-8 REGISTRATION STATEMENT NO. 333-238895
FORM S-8 REGISTRATION STATEMENT NO. 333-265377
FORM S-8 REGISTRATION STATEMENT NO. 333-279962**

*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.)

**3650 Gilmore Way
Burnaby, British Columbia V5G 4W8
Canada**

(Address of principal executive offices, including zip code)

**2026 Equity Incentive Plan
Amended and Restated 2014 Equity Incentive Plan**
(Full title of the plan)

**Thomas P. Kelly
Chief Financial Officer
Xenon Pharmaceuticals Inc.
3650 Gilmore Way
Burnaby, British Columbia V5G 4W8
Canada**

(Name and address of agent for service)

(604) 484-3300
(Telephone number, including area code, of agent for service)

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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 7(a)(2)(B) of the Securities Act.

EXPLANATORY NOTE

Pursuant to Securities Act Forms Corporation Finance Interpretation 126.43 (“CFI 126.43”) published by the Securities and Exchange Commission (the “**Commission**”), Xenon Pharmaceuticals Inc. (the “**Registrant**”) is filing this Post-Effective Amendment No. 1 to Registration Statements on Form S-8 (this “**Post-Effective Amendment**”) to the following registration statements on Form S-8 (collectively, the “**Registration Statements**”) filed by the Registrant with the Commission:

- (i) Registration Statement on Form S-8 filed by the Registrant with the Commission on November 5, 2014 (File No. 333-199860) with respect to 1,762,404 common shares of the Registrant (“**Common Shares**”), consisting of (i) 1,350,882 Common Shares, which were subject to then-outstanding stock options under the Registrant’s Amended and Restated Stock Option Plan, as amended; (ii) 36,008 Common Shares, which were subject to outstanding stock options under the Registrant’s 2014 Equity Incentive Plan (as subsequently amended, the “**Amended and Restated 2014 Plan**”); and (iii) 375,514 Common Shares to be issued under the Amended and Restated 2014 Plan;
- (ii) Registration Statement on Form S-8 filed by the Registrant with the Commission pursuant to General Instruction E on March 16, 2015 (File No. 333-202765) with respect to 150,000 Common Shares to be issued under the Amended and Restated 2014 Plan;
- (iii) Registration Statement on Form S-8 filed by the Registrant with the Commission pursuant to General Instruction E on March 9, 2016 (File No. 333-210050) with respect to 375,000 Common Shares to be issued under the Amended and Restated 2014 Plan;
- (iv) Registration Statement on Form S-8 filed by the Registrant with the Commission pursuant to General Instruction E on March 8, 2017 (File No. 333-216543) with respect to 500,000 Common Shares to be issued under the Amended and Restated 2014 Plan;
- (v) Registration Statement on Form S-8 filed by the Registrant with the Commission pursuant to General Instruction E on March 7, 2018 (File No. 333-223497) with respect to 700,000 Common Shares to be issued under the Amended and Restated 2014 Plan;
- (vi) Registration Statement on Form S-8 filed by the Registrant with the Commission pursuant to General Instruction E on March 6, 2019 (File No. 333-230103) with respect to 900,000 Common Shares to be issued under the Amended and Restated 2014 Plan;
- (vii) Registration Statement on Form S-8 filed by the Registrant with the Commission pursuant to General Instruction E on March 9, 2020 (File No. 333-237036) with respect to 1,028,806 Common Shares to be issued under the Amended and Restated 2014 Plan;
- (viii) Registration Statement on Form S-8 filed by the Registrant with the Commission pursuant to General Instruction E on June 3, 2020 (File No. 333-238895) with respect to 4,000,000 Common Shares to be issued under the Amended and Restated 2014 Plan;
- (ix) Registration Statement on Form S-8 filed by the Registrant with the Commission pursuant to General Instruction E on June 2, 2022 (File No. 333-265377) with respect to 5,300,000 Common Shares to be issued under the Amended and Restated 2014 Plan; and
- (x) Registration Statement on Form S-8 filed by the Registrant with the Commission pursuant to General Instruction E on June 5, 2024 (File No. 333-279962) with respect to 5,200,000 Common Shares to be issued under the Amended and Restated 2014 Plan.

On June 2, 2026, the Registrant’s shareholders approved the Registrant’s 2026 Equity Incentive Plan (the “**2026 Plan**”), which replaces the Amended and Restated 2014 Plan. No further awards will be made under the Amended and Restated 2014 Plan.

The number of Common Shares initially authorized for issuance pursuant to the awards under the 2026 Plan includes (a) 4,400,000 Common Shares, (b) 2,873,223 Common Shares, which equals the number of shares available for future grant under the Amended and Restated 2014 Plan as of June 2, 2026 and (c) up to 11,788,376 Common Shares, underlying awards outstanding under the Amended and Restated 2014 Plan that, on or after June 2, 2026, terminate, expire or lapse for any reason without the delivery of shares to the holder thereof (such shares under clauses (b) and (c), the “**Carryover Shares**”).

Contemporaneously with the filing of this Post-Effective Amendment, the Registrant is filing a Registration Statement on Form S-8 to register the 4,400,000 newly authorized Common Shares that have become available for offer or sale pursuant to the 2026 Plan, which number does not include the Carryover Shares.

In accordance with CFI 126.43 and pursuant to the undertaking in Item 512(a)(1)(iii) of Regulation S-K that the Registrant disclose a material change in the plan of distribution as it was originally disclosed in the Registration Statements, this Post-Effective Amendment is filed to indicate that the Registration Statements will also cover the issuance of the Carryover Shares under the 2026 Plan (as such shares would no longer be issuable under the Amended and Restated 2014 Plan as described above). No additional securities are being registered by this Post-Effective Amendment.

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 Post-Effective Amendment 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 Post-Effective Amendment as specified by Rule 428(b)(1) under the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference

The following documents previously filed with the Commission are hereby incorporated by reference:

- (1) The Registrant’s Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2025, filed with the Commission on February 26, 2026;
- (2) All other reports filed with the Commission pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “**Act**”), since the end of the fiscal year covered by the Registrant’s Annual Report referred to in (1) above; and
- (3) The description of the Registrant’s common shares contained in the Registration Statement on [Form 8-A12B](#) (File No. 001-36687) filed with the Commission on October 10, 2014, pursuant to Section 12(b) of the Act, as updated by any amendment or report filed for the purpose of updating such description, including the description of the Registrant’s Common Shares contained in Exhibit 4.3 to its Annual Report on Form 10-K for the fiscal year ended December 31, 2025, filed with the Commission on February 26, 2026.

All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Act, prior to the filing of a post-effective amendment which indicates that all securities registered have been sold or which 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 the Registration Statements. 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 the Registration Statements 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 the Registration Statements.

Under no circumstances will any information furnished under current items 2.02 or 7.01 of Form 8-K be deemed incorporated herein by reference unless such Form 8-K expressly provides to the contrary.

Item 4. Description of Securities

Not applicable.

Item 5. Interests of Named Experts and Counsel

Not applicable.

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 to the fullest extent permitted under the CBCA. 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 any person its board of directors may from time to time determine.

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, with the approval of a court, 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.

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

Exhibit Number	Description of Document	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
4.1	Specimen common share certificate of the Registrant.	S-1/A	333-198666	4.1	10/6/2014
4.2	Amended and Restated 2014 Equity Incentive Plan and related form agreement.	8-K	001-36687	10.1	6/5/2024
4.3	2026 Equity Incentive Plan and related form agreements.	8-K	001-36687	10.1	6/3/2026
5.1	Opinion of Blake, Cassels & Graydon LLP.				
5.2	Opinion of McCarthy Tétrault LLP.	S-8	333-199860	5.1	11/5/2014
5.3	Opinion of McCarthy Tétrault LLP.	S-8	333-202765	5.1	3/16/2015
5.4	Opinion of McCarthy Tétrault LLP.	S-8	333-210050	5.1	3/9/2016
5.5	Opinion of McCarthy Tétrault LLP.	S-8	333-216543	5.1	3/8/2017

Exhibit Number	Description of Document	Incorporated by Reference			
		Form	File No.	Exhibit	Filing Date
5.6	Opinion of McCarthy Tétrauld LLP.	S-8	333-223497	5.1	3/7/2018
5.7	Opinion of Blake, Cassels & Graydon LLP.	S-8	333-230103	5.1	3/6/2019
5.8	Opinion of Blake, Cassels & Graydon LLP.	S-8	333-237036	5.1	3/9/2020
5.9	Opinion of Blake, Cassels & Graydon LLP.	S-8	333-238895	5.1	6/3/2020
5.10	Opinion of Blake, Cassels & Graydon LLP.	S-8	333-265377	5.1	6/2/2022
5.11	Opinion of Blake, Cassels & Graydon LLP.	S-8	333-279962	5.1	6/5/2024
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.				
23.2	Consent of KPMG LLP, Independent Registered Public Accounting Firm.				
23.3	Consent of Blake, Cassels & Graydon LLP (contained in Exhibit 5.1 hereto).				
23.4	Consent of McCarthy Tétrauld LLP (contained in Exhibit 5.2 hereto).	S-8	333-199860	5.1	11/5/2014
23.5	Consent of McCarthy Tétrauld LLP (contained in Exhibit 5.3 hereto).	S-8	333-202765	5.1	3/16/2015
23.6	Consent of McCarthy Tétrauld LLP (contained in Exhibit 5.4 hereto).	S-8	333-210050	5.1	3/9/2016
23.7	Consent of McCarthy Tétrauld LLP (contained in Exhibit 5.5 hereto).	S-8	333-216543	5.1	3/8/2017
23.8	Consent of McCarthy Tétrauld LLP (contained in Exhibit 5.6 hereto).	S-8	333-223497	5.1	3/7/2018
23.9	Consent of Blake, Cassels & Graydon LLP (contained in Exhibit 5.7 hereto).	S-8	333-230103	5.1	3/6/2019
23.10	Consent of Blake, Cassels & Graydon LLP (contained in Exhibit 5.8 hereto).	S-8	333-237036	5.1	3/9/2020
23.11	Consent of Blake, Cassels & Graydon LLP (contained in Exhibit 5.9 hereto).	S-8	333-238895	5.1	6/3/2020
23.12	Consent of Blake, Cassels & Graydon LLP (contained in Exhibit 5.10 hereto).	S-8	333-265377	5.1	6/2/2022
23.13	Consent of Blake, Cassels & Graydon LLP (contained in Exhibit 5.11 hereto).	S-8	333-279962	5.1	6/5/2024
24.1	Power of Attorney (contained on signature page hereto).				

Item 9. Undertakings

(a) The undersigned Registrant hereby undertakes:

- (1) To 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% 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) of this section do not apply if the registration statement is on Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in 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) That, 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) To 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 this 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 Securities and Exchange Commission such indemnification is against public policy as expressed in the 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 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 Needham Heights, Massachusetts, on June 3, 2026.

XENON PHARMACEUTICALS INC.

By: /s/ Thomas P. Kelly
Thomas P. Kelly
Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Ian Mortimer and Thomas P. Kelly 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 on Form S-8, 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 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 any substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Name	Title	Date
<u>/s/ Ian Mortimer</u> Ian Mortimer	President, Chief Executive Officer and Director (Principal Executive Officer)	June 3, 2026
<u>/s/ Thomas P. Kelly</u> Thomas P. Kelly	Chief Financial Officer (Principal Financial and Accounting Officer)	June 3, 2026
<u>/s/ Dawn Svoronos</u> Dawn Svoronos	Chair of the Board of Directors	June 3, 2026
<u>/s/ Gillian Cannon</u> Gillian Cannon	Director	June 3, 2026
<u>/s/ Steven Gannon</u> Steven Gannon	Director	June 3, 2026
<u>/s/ Elizabeth Garofalo</u> Elizabeth Garofalo	Director	June 3, 2026
<u>/s/ Justin Gover</u> Justin Gover	Director	June 3, 2026
<u>/s/ Patrick Machado</u> Patrick Machado	Director	June 3, 2026
<u>/s/ Gary Patou</u> Gary Patou	Director	June 3, 2026



Blake, Cassels & Graydon LLP
1133 Melville Street, Suite 3500
The Stack
Vancouver, British Columbia, V6E 4E5
+1-604-631-3300

Exhibit 5.1

June 3, 2026

Reference: 191296/1

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

RE: Post-Effective Amendment to Registration Statements on Form S-8 of Xenon Pharmaceuticals Inc. (the “Company”)

We have acted as Canadian counsel to the Company, a corporation continued under the federal laws of Canada, in connection with the Post-Effective Amendment No. 1 to the Registration Statements on Form S-8, Reg. Nos. 333-199860, 333-202765, 333-210050, 333-216543, 333-223497, 333-230103, 333-237036, 333-238895, 333-265377 and 333-279962 (the “**Post-Effective Amendment**”) to be filed by the Company with the U.S. Securities and Exchange Commission under the Securities Act of 1933, as amended. On June 2, 2026, the shareholders of the Company approved the Company’s 2026 Equity Incentive Plan (the “**2026 Plan**”). The total number of common shares in the capital of the Company (the “**Shares**”) that may be issued under the 2026 Plan is 19,061,599, which is equal to the sum of (i) 4,400,000 Shares, (ii) 2,873,223 Shares which had been available for issuance under the Company’s Amended and Restated 2014 Equity Incentive Plan (the “**2014 Plan**”) and were not issued or subject to outstanding awards under the 2014 Plan, and (iii) up to 11,788,376 Shares subject to outstanding awards under the 2014 Plan that may expire or terminate, or are otherwise surrendered, cancelled, forfeited or repurchased by the Company at their original issuance price pursuant to a contractual repurchase right and would have become available again for issuance under the terms of the 2014 Plan (the Shares described in clauses (ii) and (iii), the “**Carryover Shares**”).

In connection with giving this opinion, we have examined the Post-Effective Amendment (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 Carryover Shares have been duly authorized and, when issued by the Company in accordance with the terms of the 2026 Plan and the agreements contemplated by the 2026 Plan, will be validly issued, fully paid and non-assessable shares in the capital of the Company.

The logo for Blakes, featuring the word "Blakes" in a white, cursive script font, set against a red, trapezoidal background that tapers to the right.

Blake, Cassels & Graydon LLP
1133 Melville Street, Suite 3500
The Stack
Vancouver, British Columbia, V6E 4E5
+1-604-631-3300

We hereby consent to the filing of this opinion letter as an exhibit to the Post-Effective Amendment and further consent to the use of our name wherever appearing in the Post-Effective Amendment.

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 truly,

/s/ Blake, Cassels & Graydon LLP

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Post-effective Amendment No. 1 to Registration Statement on Form S-8 (Nos. 333-199860, 333-202765, 333-210050, 333-216543, 333-223497, 333-230103, 333-237036, 333-238895, 333-265377, and 333-279962) of Xenon Pharmaceuticals Inc. of our report dated February 26, 2026 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Xenon Pharmaceuticals Inc.'s Annual Report on Form 10-K for the year ended December 31, 2025.

/s/ PricewaterhouseCoopers LLP
Boston, Massachusetts
June 3, 2026

Consent of Independent Registered Public Accounting Firm

The Board of Directors

Xenon Pharmaceuticals Inc.

We consent to the use of our report dated February 27, 2025, on the consolidated financial statements of Xenon Pharmaceuticals Inc. (“the Entity”), which comprise the consolidated balance sheet as of December 31, 2024, the related consolidated statements of operations and comprehensive loss, shareholders’ equity and cash flows for each of the years in the two-year period ended December 31, 2024, and the related notes, which is incorporated by reference in the Registration Statement on Form S-8 dated June 3, 2026 of the Entity.

/s/ KPMG LLP

Chartered Professional Accountants

June 3, 2026
Vancouver, Canada
