

PROSPECTUS SUPPLEMENT  
(to Prospectus dated August 9, 2024)

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## Xenon Pharmaceuticals Inc.

Up to \$400,000,000

Common Shares

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We previously entered into an at-the-market equity offering sales agreement, dated August 6, 2020, as amended on March 1, 2022, or the Sales Agreement, with Jefferies LLC, or Jefferies, and Stifel, Nicolaus & Company, Incorporated, or Stifel, collectively referred to as the sales agents and each individually as a sales agent. In accordance with the terms of the Sales Agreement, we may offer and sell our common shares, without par value, or the Shares, from time to time through Jefferies and Stifel, acting as sales agents. As of the date of this prospectus supplement, we have sold \$291,084,564 in Shares under the Sales Agreement and pursuant to a prior prospectus (the "Prior Prospectus"). This prospectus supplement is being filed to replace and supersede the Prior Prospectus in its entirety and the offering pursuant to the Prior Prospectus has been terminated. Pursuant to this prospectus supplement, we may offer and sell Shares with an aggregate offering price of up to \$400,000,000.

Sales of the Shares, if any, under this prospectus supplement will be made by any method permitted that is deemed to be an "at the market offering" as defined in Rule 415(a)(4) under the Securities Act of 1933, as amended, or the Securities Act. Each sales agent will use its commercially reasonable efforts to sell on our behalf all of the Shares requested to be sold by us, consistent with its normal trading and sales practices, on mutually agreed terms between each sales agent and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

Our common shares are listed on the Nasdaq Global Market under the symbol "XENE." The last reported sale price of our common shares on the Nasdaq Global Market on February 26, 2026 was \$44.92 per share.

Each sales agent will be entitled to compensation at a commission rate of up to 3.0% of the gross sales price of the shares sold through such sales agent under the Sales Agreement. In connection with the sale of the Shares on our behalf, the sales agents will be deemed to be "underwriters" within the meaning of the Securities Act and the compensation of the sales agents will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to the sales agents with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended, or the Exchange Act. See "Plan of Distribution" beginning on page S-11 regarding the compensation to be paid to the sales agents.

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**An investment in our Shares involves significant risks. You should carefully consider the [Risk Factors](#) beginning on page S-7 of this prospectus supplement and "Item 1A – Risk Factors" of our most recent report on Form 10-K or Form 10-Q that is incorporated by reference in this prospectus supplement, before investing in our Shares.**

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

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Jefferies

Stifel

The date of this prospectus supplement is February 27, 2026.

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You should rely only on the information contained in or incorporated by reference into this prospectus supplement, the accompanying prospectus and any free writing prospectuses prepared by us or on our behalf. We have not authorized any person to provide any information or make any statement that differs from what is contained in this prospectus supplement and any free writing prospectuses prepared by us or on our behalf. If any person does make a statement that differs from what is in this prospectus supplement or any free writing prospectuses, you should not rely on it. This prospectus supplement is not an offer to sell, nor is it a solicitation of an offer to buy, these securities in any jurisdiction in which the offer or sale is not permitted. You should assume that the information contained in this prospectus supplement, the accompanying prospectus any free writing prospectus and the documents incorporated by reference is accurate only as of its respective date, regardless of the time of delivery of this prospectus supplement, the accompanying prospectus and any free writing prospectus or of any sale of Shares in this offering. Our business, financial condition, results of operations and prospects may have subsequently changed.

## ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus form part of an automatic shelf registration statement on Form S-3 (File No. 333-281451) that we filed with the U.S. Securities and Exchange Commission, or the SEC, on August 9, 2024, as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act, utilizing a “shelf” registration process. Under this shelf registration process, we may, from time to time, sell Shares and other securities. This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of our Shares and also adds to and updates the information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement and the accompanying prospectus. The second part is the accompanying prospectus, which provides more general information about us and related matters. To the extent the information contained in this prospectus supplement differs from the information contained in the accompanying prospectus or any document filed with the SEC prior to the date of this prospectus supplement and incorporated herein by reference, the information in this prospectus supplement shall control. Generally, when we refer to this “prospectus,” we are referring to both this prospectus supplement and the accompanying prospectus combined. This prospectus supplement may add, update or change information contained in the accompanying prospectus. To the extent that any statement we make in this prospectus supplement is inconsistent with statements made in the accompanying prospectus, or any documents incorporated by reference, the statements made in this prospectus supplement will be deemed to modify or supersede those made in the accompanying prospectus, including the documents incorporated by reference therein. Information in any document we subsequently file that is incorporated by reference shall modify or supersede the information in this prospectus supplement, the accompanying prospectus and documents incorporated by reference prior to such subsequent filing.

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein include important information about us, our Shares and other information you should know before investing. This prospectus supplement describes the specific details regarding this offering, including the price, the amount of Shares being offered and the risks of investing in our Shares.

You should carefully read this prospectus supplement and the accompanying prospectus together with the additional information described under the headings “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference.”

This prospectus supplement and the accompanying prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the Shares to which it relates, nor do this prospectus supplement and the accompanying prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

Unless the context requires otherwise, references in this prospectus supplement to “Xenon,” “the Company,” “we,” “us” and “our” refer to Xenon Pharmaceuticals Inc. and its wholly-owned subsidiary. We use the Xenon logo and other marks as trademarks in the United States and other countries. This prospectus supplement and the other documents incorporated by reference contain references to our trademarks as well as third-party trademarks. Solely for convenience, trademarks and trade names, including logos, artwork and other visual displays, may appear without the ® or TM 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 of third-party trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other entity.

## CAUTIONARY STATEMENT ABOUT FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein include forward-looking statements within the meaning of Section 27A of the Securities Act, Section 21E of the Exchange Act, and Canadian securities laws. All statements other than statements of historical facts contained in this prospectus supplement, the accompanying prospectus and in the documents incorporated by reference herein and therein, including statements regarding the future financial position, business strategy and plans and objectives of management for future operations, are forward-looking statements. The words “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “should,” “plan,” “expect,” and similar expressions, as they relate to us, are intended to identify forward-looking statements. We have based these forward-looking statements largely on current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including, without limitation, those described in “Risk Factors” in this prospectus supplement and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2025 and in our subsequent Quarterly Reports on Form 10-Q, including, among other things:

- our ability to identify additional products or product candidates either from our internal research efforts or through acquiring or in-licensing other product candidates or technologies;
- the initiation, timing, cost, progress and success of our research and development programs, pre-clinical studies, and clinical studies;
- our ability to advance product candidates into, and successfully complete, clinical studies;
- our ability to recruit sufficient numbers of patients for our current and future clinical studies;
- our ability to obtain funding for our operations in sufficient amounts or on terms acceptable to us, including funding necessary to complete further development, approval and, if approved, commercialization of our product candidates;
- our ability to independently develop and commercialize product candidates;
- developments relating to our competitors and our industry, including the success of competing therapies that are or become available;
- our pre-commercial, commercialization, marketing and manufacturing capabilities and strategy;
- our ability to obtain and maintain intellectual property protection for our product candidates and the duration of such protection;
- the therapeutic benefits, effectiveness and safety of our product candidates;
- the timing of, and our and our collaborators’ ability to obtain and maintain, regulatory approvals for 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 and our ability to serve those markets, either alone or in partnership with others;
- the rate and degree of market acceptance and clinical utility of any future products;
- the pricing and reimbursement of our product candidates, if approved;
- our expectations regarding federal, state and foreign regulatory requirements;
- our ability to establish and maintain collaborations;
- our expectations regarding market risk, including interest rate changes and foreign currency fluctuations;
- our estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- our ability to engage and retain the employees required to grow our business;
- our use of proceeds of this offering;
- our future financial performance; and
- the direct and indirect impact of pandemics, epidemics and other public health crises on our business and operations, including supply chain, manufacturing, research and development costs, clinical study conduct, clinical study data and employees.

These risks are not exhaustive. Other sections of this prospectus supplement and the accompanying prospectus and the documents incorporated by reference herein and therein include additional factors which could adversely impact our business and financial performance. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time and it is not possible for us to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. We cannot assure you that the events and circumstances reflected in the forward-looking statements will be achieved or occur. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. These statements, like all statements in this prospectus supplement and the accompanying prospectus, speak only as of their date, and we undertake no obligation to update or revise any forward-looking statements in light of future developments, except as required by law. Our Risk Factors are not guarantees that no such conditions exist as of the date of this prospectus supplement and should not be interpreted as an affirmative statement that such risks or conditions have not materialized, in whole or in part.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus supplement and the accompanying prospectus, and although we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted a thorough inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

## PROSPECTUS SUPPLEMENT SUMMARY

*This summary highlights selected information appearing elsewhere or incorporated by reference in this prospectus supplement and may not contain all of the information that is important to you. This prospectus supplement includes or incorporates by reference information about the Shares we are offering as well as information regarding our business, risks and detailed financial data. You should read this prospectus supplement in its entirety, including the information incorporated by reference herein.*

### **Xenon Pharmaceuticals Inc.**

We are a neuroscience-focused biopharmaceutical company dedicated to drug discovery, clinical development and commercialization of life-changing therapeutics. We are advancing a differentiated product pipeline led by our investigational candidate, azetukalner, which is being studied in multiple Phase 3 studies in epilepsy, major depressive disorder, or MDD, and bipolar depression, or BPD. Our early-stage pipeline includes Kv7 potassium channel openers and Nav sodium channel modulators being advanced for select high-need indications, including pain.

#### **Azetukalner Clinical Development**

Azetukalner, a novel, potent Kv7 potassium channel opener, represents the most advanced, clinically-validated potassium channel modulator in late-stage clinical development for the treatment of multiple indications, including two in epilepsy – focal onset seizures, or FOS, and primary generalized tonic-clonic seizures, or PGTCS, – as well as neuropsychiatric disorders, MDD and BPD.

##### *Epilepsy Programs*

- Topline data from the Phase 3 X-TOLE2 study of azetukalner in FOS is on track for the first half of March 2026.
- Phase 3 X-TOLE3 study of azetukalner in FOS continues to enroll and is intended to support regulatory submissions outside the United States. We have completed an ethnobridging study and shared results with Japan's Pharmaceutical and Medical Devices Agency, or PMDA. We aligned with PMDA to enroll approximately 60 of the planned 360 X-TOLE3 participants in Japan to support a potential regulatory submission in Japan. X-TOLE3 enrollment outside of Japan is expected to complete in 2026.
- Phase 3 X-ACKT study of azetukalner in PGTCS continues to enroll and is intended to support regulatory submissions for an additional epilepsy indication.
- The Company presented 48-month data from the X-TOLE open label extension (OLE) study at the American Epilepsy Society (AES) annual meeting, reinforcing the long-term efficacy and safety of azetukalner with more than 775 patient-years of exposure data in the OLE. Among participants treated for  $\geq 48$  months, reductions in monthly FOS frequency were over 90% from double-blind period baseline, with over 38% achieving at least 12 months of seizure freedom.

##### *Depression Programs*

- Enrollment is ongoing for the Phase 3 X-NOVA2 and X-NOVA3 studies evaluating azetukalner in patients with MDD, with topline data from X-NOVA2 expected in H1 2027.
- Phase 3 X-CEED study evaluating azetukalner in patients with BPD I or II, is underway.

#### **Early-Stage R&D**

We continue to expand our portfolio of innovative potassium and sodium channel modulators. Nav1.7 and Kv7 are important targets for pain and have been developed using our strong heritage in human genetics, deep understanding of ion channel biology, and expertise in novel chemistries to design potent, selective ion channel modulators.

##### *Pain*

- Phase 1 Single Ascending Dose/Multiple Ascending Dose, or SAD/MAD, study in healthy adult participants is underway for XEN1701 targeting Nav1.7. Study completion is expected in 2026 to support initiating a Phase 2 proof-of-concept study in acute pain.
- Phase 1 SAD/MAD study in healthy adult participants is underway for XEN1120 targeting Kv7. Study completion is expected in 2026 to support initiating a Phase 2 proof-of-concept study in acute pain.

## *Epilepsy*

- Investigational New Drug-enabling studies are ongoing for our Nav1.1 program. Pre-clinical data suggest that targeting Nav1.1 could potentially address the underlying cause and symptoms of Dravet Syndrome.

## **Partnered Program**

- In collaboration with Neurocrine Biosciences, Inc., a Phase 1 study is ongoing for NBI-921355, an investigational, selective inhibitor of voltage-gated sodium channels Nav1.2 and Nav1.6 in development for the potential treatment of certain types of epilepsy.

## **Risk Factors Summary**

This investment involves a high degree of risk. See “Risk Factors” beginning on page S-7 of this prospectus supplement and the similarly titled sections in the documents incorporated by reference into this prospectus.

## **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 one wholly-owned subsidiary as of the date of this prospectus supplement, Xenon Pharmaceuticals USA Inc., which was incorporated in Delaware on December 2, 2016. Our principal executive offices are located at 3650 Gilmore Way, Burnaby, British Columbia, Canada V5G 4W8, and our telephone number is (604) 484-3300. We are a reporting issuer in British Columbia, Alberta and Ontario, but our Shares are not listed on any recognized Canadian stock exchange. Our Shares trade on the Nasdaq Global Market under the symbol “XENE.” Our website address is [www.xenon-pharma.com](http://www.xenon-pharma.com). The information on, or that can be accessed through, our website is not incorporated by reference into this prospectus supplement and should not be considered to be a part of this prospectus supplement.

## THE OFFERING

<b>Shares offered by us</b>	Shares having an aggregate offering price of up to \$400,000,000.
<b>Common shares to be outstanding after this offering</b>	Up to 8,904,719 common shares, assuming a sales price of \$44.92 per share, which was the last reported sale price of our Shares on the Nasdaq Global Market on February 26, 2026. The actual number of shares issued will vary depending on the sales price under this offering.
<b>Plan of Distribution</b>	“At the market offering” that may be made from time to time on the Nasdaq Global Market, if at all, through the sales agents. See “Plan of Distribution” on page S-11 of this prospectus supplement.
<b>Use of Proceeds</b>	We intend to use the net proceeds from the sale of Shares offered by this prospectus supplement, together with other available funds, to progress our clinical development programs, initiate pre-commercial activities, fund our discovery and pre-clinical activities and for other general corporate purposes. See “Use of Proceeds” on page S-8 of this prospectus.
<b>Risk Factors</b>	This investment involves a high degree of risk. See “Risk Factors” beginning on page S-7 of this prospectus supplement and the similarly titled sections in the documents incorporated by reference herein.
<b>Nasdaq Global Market symbol</b>	Our Shares are listed on Nasdaq under the symbol “XENE.”

The number of common shares that will be outstanding after this offering as shown above is based on 80,010,790 common shares outstanding as of December 31, 2025, which number excludes:

- 11,074,720 common shares issuable upon the exercise of stock options to purchase common shares as of December 31, 2025, at a weighted average exercise price of \$32.40 per common share;
- 257,450 common shares issuable upon the vesting of outstanding performance share units as of December 31, 2025;
- 348,994 common shares issuable upon the vesting of outstanding restricted share units as of December 31, 2025;
- 5,004,392 common shares reserved for future issuance under our Amended and Restated 2014 Equity Incentive Plan as of December 31, 2025;
- pre-funded warrants to purchase 2,173,081 common shares outstanding as of December 31, 2025, at an exercise price of \$0.0001 per share; and
- 97,800 common shares reserved for future issuance under our Amended and Restated 2025 Inducement Equity Plan as of December 31, 2025.

## RISK FACTORS

Investing in our securities involves a high degree of risk. Before purchasing our securities, you should carefully consider the risk factors relating to Xenon Pharmaceuticals Inc. set forth below along with those that are incorporated by reference in this prospectus supplement from our Annual Report on Form 10-K for the year ended December 31, 2025 and subsequent Quarterly Reports on Form 10-Q, as well as the risks, uncertainties and additional information set forth in our SEC reports on Forms 10-K, 10-Q and 8-K and in the other documents incorporated by reference in this prospectus. For a description of these reports and documents, and information about where you can find them, see “Where You Can Find More Information” and “Incorporation of Certain Documents by Reference.” Additional risks not presently known or that we presently consider to be immaterial could subsequently materially and adversely affect our financial condition, results of operations, business and prospects.

### Risks Related to this Offering

*If you purchase Shares sold in this offering, you will experience immediate and substantial dilution in the net tangible book value of your Shares.*

The price per common share being offered may be higher than the net tangible book value per share of our outstanding common shares prior to this offering. Assuming that an aggregate of 8,904,719 Shares are sold at an assumed offering price of \$44.92 per common share, the last reported sale price of our Shares on the Nasdaq Global Market on February 26, 2026, for aggregate gross proceeds of approximately \$400.0 million, and after deducting commissions and estimated offering expenses payable by us, new investors in this offering will incur immediate dilution of \$33.99 per common share. For a more detailed discussion of the foregoing, see the section entitled “Dilution” below.

*We will have broad discretion over the use of the net proceeds from this offering.*

We will have broad discretion to use the net proceeds from the sale of Shares in this offering, and investors in our Shares will be relying on the judgment of our board of directors and management regarding the application of these proceeds. Although we intend to use the net proceeds from this offering to progress our clinical development programs and for other general corporate purposes, we have not allocated these net proceeds for specific purposes. Investors will not have the opportunity, as part of their investment decision, to assess whether the proceeds are being used appropriately. Our use of the proceeds may not improve our operating results or increase the value of the securities being offered hereby.

## USE OF PROCEEDS

We intend to use the net proceeds from the sale of Shares offered by this prospectus supplement, together with other available funds, to progress our clinical development programs, support pre-commercial and commercial activities, fund our discovery and pre-clinical activities and for other general corporate purposes. The amount of net proceeds from this offering will depend upon the number of Shares sold and the market prices at which they are sold. There can be no assurance that we will be able to sell any Shares under or fully utilize the Sales Agreement as a source of financing.

We have not specifically identified the precise amounts we will spend on particular areas or the timing of these expenditures. The amounts actually expended for each purpose may vary significantly depending upon numerous factors, including the amount and timing of the proceeds from the sale of Shares offered by this prospectus supplement, the progress of our clinical trials, pre-commercialization efforts and other product development activities. In addition, expenditures may also depend on the establishment of new collaborative arrangements with other partners, the availability of other financing and other factors. Pending these uses, we plan to invest these net proceeds in treasury bills, corporate bonds, commercial paper, term deposits, bankers acceptances or deposit-based investments including, but not limited to, interest savings accounts. The goal with respect to the investment of these net proceeds is capital preservation and liquidity so that such funds are readily available to fund our operations.

We anticipate that we will be required to raise substantial additional capital to continue to fund the clinical development of our product candidates. If we are able to gain marketing approval for product candidates that we develop, we will require significant additional amounts of capital in order to launch and commercialize such product candidates to the extent that such launch and commercialization are not the responsibility of a collaborator. We expect to finance our future cash needs through public or private equity offerings, debt financings, royalty-based financing, collaborations, licensing arrangements or other sources, or any combination of the foregoing.

## DILUTION

If you invest in our Shares, your interest will be diluted immediately to the extent of the difference between the public offering price per common share you will pay in this offering and the as adjusted net tangible book value per common share after this offering. Net tangible book value per common share represents our total tangible assets less total liabilities, divided by the number of common shares outstanding.

As of December 31, 2025, our net tangible book value was \$581.8 million, or \$7.27 per common share. After giving effect to the sale of our Shares in the aggregate amount of \$400.0 million at an assumed offering price of \$44.92 per common share, the last reported sale price of our common shares on February 26, 2026 on the Nasdaq Global Market, and after deducting estimated commissions and estimated offering expenses, our as adjusted net tangible book value as of December 31, 2025 would have been approximately \$971.5 million or approximately \$10.93 per common share. This represents an immediate increase in the net tangible book value of \$3.66 per common share to existing shareholders and an immediate dilution of \$33.99 per common share to new investors purchasing Shares in this offering.

The following table illustrates this per common share dilution to the new investors purchasing Shares in this offering:

Assumed public offering price per common share		\$44.92
Net tangible book value per common share at December 31, 2025	\$7.27	
Increase in net tangible book value per common share attributable to this offering	\$3.66	
As adjusted net tangible book value per common share after this offering		\$10.93
Dilution per common share to new investors in this offering		\$33.99

The table above assumes for illustrative purposes an aggregate of 8,904,719 Shares are sold at a price of \$44.92 per common share, for aggregate gross proceeds of \$400.0 million. The Shares, if any, sold in this offering will be sold from time to time at various prices. An increase of \$1.00 per common share in the price at which the Shares are sold from the assumed offering price of \$44.92 per common share shown in the table above, assuming all of our Shares in the aggregate amount of \$400.0 million are sold at that price, would increase our adjusted net tangible book value per common share after the offering to \$10.95 per common share and would increase the dilution in net tangible book value per common share to new investors in this offering to \$34.97 per common share, after deducting estimated commissions and estimated offering expenses. A decrease of \$1.00 per common share in the price at which the Shares are sold from the assumed offering price of \$44.92 per common share shown in the table above, assuming all of our Shares in the aggregate amount of \$400.0 million are sold at that price, would decrease our adjusted net tangible book value per common share after the offering to \$10.90 per common share and would decrease the dilution in net tangible book value per common share to new investors in this offering to \$33.02 per common share, after deducting estimated commissions and estimated offering expenses. This information is supplied for illustrative purposes only.

The foregoing table and calculations are based on 80,010,790 common shares outstanding as of December 31, 2025, which number excludes:

- 11,074,720 common shares issuable upon the exercise of stock options to purchase common shares as of December 31, 2025, at a weighted average exercise price of \$32.40 per common share;
- 257,450 common shares issuable upon the vesting of outstanding performance share units as of December 31, 2025;
- 348,994 common shares issuable upon the vesting of outstanding restricted share units as of December 31, 2025;
- 5,004,392 common shares reserved for future issuance under our Amended and Restated 2014 Equity Incentive Plan as of December 31, 2025;
- pre-funded warrants to purchase 2,173,081 common shares outstanding as of December 31, 2025, at an exercise price of \$0.0001 per share; and
- 97,800 common shares reserved for future issuance under our Amended and Restated 2025 Inducement Equity Plan as of December 31, 2025.

To the extent the stock options or warrants outstanding as of December 31, 2025 have been or are exercised, or other common shares are issued, investors purchasing Shares in this offering could experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations, even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our shareholders.

## **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.

## PLAN OF DISTRIBUTION

We previously entered into the Sales Agreement on August 6, 2020, as amended on March 1, 2022, under which we may issue and sell our Shares from time to time through Jefferies and Stifel, acting as our sales agents. As of the date of this prospectus supplement, we have sold \$291,084,564 in Shares under the Sales Agreement and pursuant to the Prior Prospectus. This prospectus supplement replaces and supersedes the Prior Prospectus in its entirety. Pursuant to this prospectus supplement, we may offer and sell up to \$400,000,000 of Shares. Sales of our Shares, if any, under this prospectus supplement will be made by any method that is deemed to be an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act, including sales made directly on or through the Nasdaq Global Market or any other existing trading market for the common shares in the United States. This summary of the material provisions of the Sales Agreement does not purport to be a complete statement of its terms and conditions. A copy of the Sales Agreement is filed as Exhibit 1.1 to the Current Report on Form 8-K filed with the SEC on March 1, 2022.

Each sales agent will offer the Shares subject to the terms and conditions of the Sales Agreement on any trading day or as otherwise agreed upon by us and such sales agent. We will designate the maximum amount and minimum price of Shares to be sold through a sales agent on a daily basis or otherwise determine such amounts together with the sales agents. Subject to the terms and conditions of the Sales Agreement, each sales agent will use its commercially reasonable efforts to sell on our behalf the Shares. We may instruct the sales agents not to sell Shares if the sales cannot be effected at or above the price designated by us in any such instruction. We may only instruct one sales agent to sell Shares on any single given day. We or the sales agents may suspend the offering of Shares being made under the Sales Agreement upon proper notice. Each sales agent will receive from us a commission of up to 3.0% of the gross sales price per Share for any Shares sold through it under the Sales Agreement. The remaining sales proceeds, after deducting any expenses payable by us and any transaction fees imposed by any governmental, regulatory, or self-regulatory organization in connection with the sales, will equal our net proceeds for the sale of such Shares.

Each sales agent will provide written confirmation to us following the close of trading on the Nasdaq Global Market each day in which Shares are sold by such sales agent for us under the Sales Agreement. Each confirmation will include the number of Shares sold on that day, the gross sales price per Share, the net proceeds to us, and the compensation payable by us to the sales agent.

Settlement for sales of Shares will occur, unless we and the applicable sales agent agree otherwise, on the first business day that is also a trading day following the date on which any sales were made in return for payment of the net proceeds to us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

In connection with the sale of the Shares on our behalf, the sales agents will be deemed to be “underwriters” within the meaning of the Securities Act, and the compensation paid to the sales agents will be deemed to be underwriting commissions or discounts. We have agreed in the Sales Agreement to provide indemnification and contribution to the sales agents against certain civil liabilities, including liabilities under the Securities Act.

We estimate that the total expenses of the offering payable by us, excluding discounts and commissions payable to the sales agents under the Sales Agreement, will be approximately \$225,000.

The offering of Shares pursuant to the Sales Agreement will terminate upon the earlier of (1) the sale of all of the Shares subject to the Sales Agreement and (2) the termination of the Sales Agreement by the sales agents or us, as permitted therein.

The sales agents and their affiliates may in the future provide various investment banking, commercial banking, financial advisory and other financial services for us and our affiliates, for which services they may in the future receive customary fees. In the course of their business, the sales agents may actively trade our securities for their own account or for the accounts of customers, and, accordingly, the sales agents may at any time hold long or short positions in such securities.

## MATERIAL 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, to the extent set forth below, 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 who is a citizen or resident of the U.S. (for U.S. federal income tax purposes);
- 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 Treasury Regulations (as defined below) 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 or broker 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 who owns, directly, indirectly or constructively, or is deemed to own 10% or more of our equity, by vote or value;
- a partnership or other pass-through entity for U.S. federal income tax purposes;
- a person whose “functional currency” is not the U.S. dollar;
- a person that received common shares as compensation for the performance of services;
- a person holding our common shares in connection with a trade or business conducted outside the United States; or
- a former citizen or long-term resident of the U.S.

If a partnership (or any other entity or arrangement treated as a partnership for U.S. federal income tax purposes) 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 the regulations thereunder, or the Treasury Regulations, including proposed Treasury Regulations, Internal Revenue Service, or the IRS, rulings and judicial decisions thereunder as of the date of this prospectus. 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, including U.S. federal estate, gift and alternative minimum tax consequences, the special tax accounting rules under Section 451(b) of the Code, the corporate alternative minimum tax under Section 55 of the Code, or any state, local or non-U.S. tax consequences.

**If you are considering the purchase of our 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 and Other Distributions on our Common Shares***

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 may qualify for reduced effective tax rates applicable to long-term capital gains on dividends received from a “qualified foreign corporation” provided certain holding period and other requirements are met. A non-U.S. corporation generally will be considered to be a qualified foreign corporation if (i) it is eligible for the benefits of a comprehensive tax treaty with the United States, which the Secretary of the Treasury of the United States determines is satisfactory for purposes of this provision, and which includes an exchange of information provision; or (ii) its shares are readily tradeable on an established securities market in the United States. However, if we are a passive foreign investment company, or PFIC, for the taxable year in which the dividends are paid or the preceding taxable year (see “Passive Foreign Investment Company Consequences” below), we will not be treated as a qualified foreign corporation, and therefore the reduced effective 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 effective rate of taxation regardless of our status as a qualified foreign corporation. Further, the effective 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 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 liability. 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. The rules relating to the availability of foreign tax credits and the foreign source income classification relevant to the use of the foreign tax credits are complex. These depend on a number of factors, including but not limited to whether we are a “United States owned foreign corporation,” whether such income is in the “passive category,” claims required by and special elections available to qualified treaty residents, and special rules related to foreign tax credits with respect to dividends from a PFIC. In the event we pay a dividend, each US Holder should consult with its own tax advisor to determine its tax filing position with respect to foreign tax credits that may be available with respect to withholding tax imposed by Canada.

To the extent that the amount of any distribution or deemed distribution exceeds our current and accumulated earnings and profits, 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 (but not below zero) 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. Holder. 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 Sales or Other Dispositions***

Subject to the discussion below under “Passive Foreign Investment Company Consequences,” a U.S. Holder will recognize taxable gain or loss on the sale or other taxable disposition of our common shares equal to the difference between the amount realized for the common shares and the U.S. Holder’s adjusted tax basis in the common shares and 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, under current law, 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, after applying certain look-through rules with respect to the income and assets of its subsidiaries, in which either (i) at least 75% of its gross income is “passive income”, in which case we meet the PFIC gross income test, or (ii) at least 50% of the quarterly average percentage of its assets (as determined under applicable Treasury Regulations) is attributable to assets that produce passive income or are held for the production of passive income, in which case we meet the PFIC asset test. 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 passive income 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. In the case of a publicly traded corporation, 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 (which, in our case, may be determined in part by the market value of our common shares, which is subject to change). In determining whether the PFIC gross income test or asset test are met, 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 our gross income and gross assets, we were a PFIC for the taxable year ended December 31, 2025, and we may be a PFIC in 2026.

However, our status as a PFIC is a fact-intensive determination made on an annual basis and the applicable law is subject to varying interpretation. In addition, our PFIC status determination can be made only after the end of each taxable year. Accordingly, we cannot provide any assurance regarding our PFIC status for the current taxable year or for future taxable years. Neither our U.S. counsel nor U.S. tax advisor expresses any opinion with respect to our PFIC status or with respect to our expectations regarding our PFIC status.

If we are a PFIC in any taxable year during which a U.S. Holder owns our common shares, such U.S. Holder would be subject to taxation under the rules related to “excess distributions.” Under such rules, additional taxes and interest charges would apply to certain distributions (including deemed distributions) by us or to gain upon dispositions of our common 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” and has not made a “mark-to-market election,” each as described further below. If we are a PFIC and the U.S. Holder has not made either of the foregoing elections, all of 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 the actual distributions (or such constructive distributions) during a taxable year received by the U.S. Holder exceeds 125% of the average of such 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 other taxable years (or portions thereof) of the U.S. Holder will be taxed at the highest marginal rates in effect for individuals or corporations as applicable to such U.S. Holder and 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 no longer meet either test, 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 and until 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 common 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 common shares. Gain realized from the sale of our common 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 common 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 to which a PFIC Annual Information Statement is attached. U.S. Holders will be eligible to make and maintain QEF elections only if we provide such U.S. Holders the information they will need to comply with the QEF rules. If we believe we are a PFIC in the current or a future tax year, we will provide, upon request, U.S. Holders with the information that is necessary in order for them to make a QEF election and to report their pro rata 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 on the sale or disposition of our common shares. A mark-to-market election will not apply to our common shares for any taxable year during which we do not meet either the PFIC gross income test or asset test, but it will remain in effect with respect to any subsequent taxable year in which we again meet the PFIC gross income test or asset test. 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 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 Department may require.

**U.S. HOLDERS ARE STRONGLY URGED TO CONSULT THEIR TAX ADVISORS REGARDING THE APPLICATION OF THE PFIC RULES TO THEIR INVESTMENT IN OUR COMMON SHARES.**

#### ***Net Investment Income Tax***

Certain U.S. Holders who are individuals, estates or trusts may be subject to a 3.8% U.S. federal income tax on all or a portion of their “net investment income,” which includes all or a portion of their dividends (or deemed dividends) on our common shares and net gains from the disposition of our common shares. U.S. Holders that are individuals, estates or trusts should consult their tax advisors regarding the applicability of the U.S. federal income tax on net investment income to any of their income or gains in respect of our common shares.

#### ***Information Reporting and Backup Withholding***

In general, information reporting will apply to dividends (or deemed 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 and properly certifies their exemption. 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 may

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 common 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.

#### **Principal Canadian Federal Income Tax Considerations**

The following summary describes, as of the date hereof, the principal Canadian federal income tax consequences under the Income Tax Act (Canada) and the regulations promulgated thereunder (the "Canadian Tax Act") generally applicable to a holder (a "Holder") who acquires our common shares pursuant to this offering as beneficial owner and who, for the purposes of the Canadian Tax Act, and at all relevant times: (a) is not (and is not deemed to be) resident in Canada; (b) 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 in Canada, or otherwise in connection with a business carried on in Canada (including an adventure or concern in the nature of trade); (c) holds the common shares as capital property; and (d) deals at arm's length with, and is not affiliated with (each within the meaning of the Canadian Tax Act), us or the sales agents. Generally, the common shares will be considered to be capital property to the Holder thereof provided that the Holder does not use or hold (and will not use or hold) such securities in the course of carrying on a business of trading or dealing in securities and such Holder has not acquired (and will not acquire) such securities in one or more transactions considered to be an adventure or concern in the nature of trade.

This summary is not applicable to: (a) a Holder that carries on an insurance business in Canada and elsewhere; (b) a Holder that is "authorized foreign bank" (as defined in the Canadian Tax Act); or (c) a Holder that has entered into a "derivative forward agreement", "synthetic equity arrangement" or "synthetical disposition arrangement" (each as defined in the Canadian Tax Act) with respect to the common shares. Any such Holder to which this summary does not apply should consult its own tax advisor with respect to an investment in the common shares.

This summary is based upon the facts set out in this prospectus, the current provisions of the Canadian Tax Act in effect as of the date hereof, counsel's understanding of the published administrative and assessing policies and practices of the Canada Revenue Agency (the "CRA") published in writing by the CRA and publicly available prior to the date hereof and all specific proposals to amend the Canadian Tax Act that have been publicly and officially announced by or on behalf of the Minister of Finance (Canada) prior to the date hereof (the "Canadian Tax Proposals"). This summary assumes that the Canadian Tax Proposals will be enacted as currently proposed; however, no assurance can be given that the Canadian Tax Proposals will be enacted as proposed or at all. This summary does not otherwise take into account or anticipate any changes in law, or the CRA's administrative policies or assessing practices, whether by way of legislative, governmental or judicial decision or action, nor does it take into account other federal or any provincial, territorial or foreign tax legislation or considerations, which may differ significantly from those discussed herein.

**This summary is not exhaustive of all possible Canadian federal income tax considerations of acquiring, holding or disposing of 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 and no representations with respect to the tax consequences to any prospective Holder are made. The tax consequences of acquiring, holding, and disposing of the common shares will vary according to the Holder's particular circumstances. 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.**

### ***Currency Conversion***

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 relevant exchange rates determined in accordance with the Canadian Tax Act.

### ***Dividends on the Shares***

Dividends paid or credited or deemed to be paid or credited to a Holder by us on any common shares will be subject to Canadian withholding tax at the rate of 25% on the gross amount of the dividend unless such rate is reduced by the terms of an applicable income tax treaty or convention between Canada and the country in which the Holder is resident. In general, in the case of a Holder who is a resident of the United States for purposes of the Canada-United States Tax Convention (1980), as amended (the "Convention") who is paid or credited a dividend or deemed dividend, is the beneficial owner of such dividend or deemed dividend and who qualifies for full benefits under the Convention (a "U.S. Holder"), the rate of such Canadian withholding tax will generally be reduced to 15% of the gross amount of the dividend (or 5% in the case of a U.S. Holder that is a company beneficially owning, directly or indirectly, at least 10% of our voting shares). The Multilateral Convention to Implement Tax Treaty Related Measures to Prevent Base Erosion and Profit Shifting (the "MLI"), of which Canada is a signatory, affects many of Canada's tax treaties (but not the Convention), including the ability to claim benefits thereunder. Holders should consult their own tax advisors to determine their entitlement to relief under an applicable income tax treaty or convention.

### ***Dispositions of the Shares***

A Holder will not be subject to tax under the Canadian Tax Act in respect of any capital gain realized by such Holder on a disposition, or deemed disposition, of the Shares nor will capital losses arising therefore be recognized under the Canadian Tax Act, unless the common shares constitute "taxable Canadian property," as defined in the Canadian Tax Act, of the Holder at the time of disposition and the Holder is not entitled to an exemption under the applicable income tax treaty or convention and the country in which the Holder is resident at the time of the disposition (including as a result of the application of the MLI).

Generally, as long as the common shares are listed on a "designated stock exchange" as defined in the Canadian Tax Act (which currently includes the Nasdaq) at the time of disposition or deemed disposition, the common shares will not constitute taxable Canadian property of a Holder, unless (a) at any time during the 60-month period immediately preceding the disposition the following two conditions are met concurrently: (i) one or any combination of (A) the Holder, (B) persons with whom the Holder does not deal at arm's length (within the meaning of the Canadian Tax Act), and (C) partnerships in which the 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 one or a combination of real or immovable 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 of the Holder. If the common shares are considered taxable Canadian property to a Holder, an applicable income tax treaty or convention may in certain circumstances exempt that Holder from tax under the Canadian Tax Act in respect of the disposition or deemed disposition of the Shares. **Holders whose common shares are, or may be "taxable Canadian property" should consult their own tax advisors regarding the tax and compliance considerations that may be relevant to them.**

## LEGAL MATTERS

We are being represented by Ropes & Gray LLP, Boston, Massachusetts. The validity of the Shares being offered by this prospectus supplement and legal matters relating to Canadian laws will be passed upon for us by Blake, Cassels & Graydon LLP, Vancouver, British Columbia. Jefferies LLC and Stifel, Nicolaus & Company, Incorporated are being represented in connection with this offering by Cooley LLP, New York, New York.

## EXPERTS

The consolidated financial statements as of December 31, 2025 and for the year then ended and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Annual Report on Internal Control over Financial Reporting) as of December 31, 2025 incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2025 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The consolidated financial statements of Xenon Pharmaceuticals Inc. as of December 31, 2024, and for each of the years in the two-year period ended December 31, 2024 have been incorporated by reference herein in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and other reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the internet at the SEC's website at [www.sec.gov](http://www.sec.gov). Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act can also be accessed free of charge through the internet. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. You may also access these filings through our website at [www.xenon-pharma.com](http://www.xenon-pharma.com).

## INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus supplement the information we have filed with the SEC. The information we incorporate by reference into this prospectus supplement is an important part of this prospectus supplement. Any statement in a document we incorporate by reference into this prospectus supplement will be considered to be modified or superseded to the extent a statement contained in this prospectus supplement or any other subsequently filed document that is incorporated by reference into this prospectus modifies or supersedes that statement. The modified or superseded statement will not be considered to be a part of this prospectus supplement, except as modified or superseded.

We incorporate by reference into this prospectus supplement the information contained in the documents listed below, which is considered to be a part of this prospectus supplement:

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2025, filed with the SEC on February 26, 2026;
- the portions of our Definitive Proxy Statement on [Schedule 14A](#) (other than information furnished rather than filed) that are incorporated by reference into our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, filed with the SEC on April 24, 2025; and
- the description of our Shares contained in our Registration Statement on Form [8-A](#) as filed with the SEC on October 10, 2014 pursuant to Section 12(b) of the Exchange Act, as supplemented by Exhibit 4.3 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on February 29, 2024, and any other amendments or reports filed for the purpose of updating such description.

We also incorporate by reference all documents filed pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement and prior to the termination of this offering; provided, however, that we are not incorporating any information furnished under Item 2.02 or Item 7.01 of any Current Report on Form 8-K that we may subsequently file.

Statements made in this prospectus supplement or the accompanying prospectus or in any document incorporated by reference in this prospectus supplement as to the contents of any contract or other document referred to herein or therein are not necessarily complete,

and in each instance reference is made to the copy of such contract or other document filed as an exhibit to the documents incorporated by reference, each such statement being qualified in all material respects by such reference.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

Xenon Pharmaceuticals Inc.  
Attn: Investor Relations  
3650 Gilmore Way  
Burnaby, BC V5G 4W8  
Canada  
(604) 484-3300

You may also access the documents incorporated by reference in this prospectus supplement through our website at [www.xenon-pharma.com](http://www.xenon-pharma.com). Except for the specific incorporated documents listed above, no information available on or through our website shall be deemed to be incorporated in this prospectus supplement or the registration statement of which it forms a part.



## Xenon Pharmaceuticals Inc.

Common Shares  
Preferred Shares  
Warrants  
Units

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We may offer and sell from time to time, in one or more series or issuances and on terms that we will determine at the time of the offering, any combination of the securities described in this prospectus, either individually or as units comprised of one or more of the other classes of securities.

This prospectus provides a general description of the securities we may offer. Each time we offer and sell securities, we will provide specific terms of the securities offered in a supplement to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings. A prospectus supplement and any free writing prospectus may also add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement, and any related free writing prospectus, as well as the documents incorporated or deemed to be incorporated by reference in this prospectus, before you invest in any of our securities offered hereby.

**This prospectus may not be used to consummate a sale of any securities unless it is accompanied by a prospectus supplement.**

We may offer and sell the securities described in this prospectus and any prospectus supplement to or through one or more underwriters, broker-dealers, agents, directly to purchasers, or through any other means described in this prospectus under “Plan of Distribution” and in supplements to this prospectus in connection with a particular offering of securities. If any underwriters, dealers or agents are involved in the sale of any of these securities, their names and any applicable purchase price, fee, commission or discount arrangement between or among them will be set forth, or will be calculable from the information set forth, in the applicable prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Our common shares are listed on The Nasdaq Global Market, or Nasdaq, under the symbol “XENE.” On August 8, 2024, the last reported sale price of our common shares on Nasdaq was \$41.01 per share. There is currently no market for the other securities we may offer; however, we will provide information in any applicable prospectus supplement regarding any listing of securities other than our common shares on any securities exchange.

**INVESTING IN OUR SECURITIES INVOLVES SIGNIFICANT RISKS. PLEASE CAREFULLY READ THE INFORMATION UNDER THE HEADINGS “[RISK FACTORS](#)” BEGINNING ON PAGE 4 OF THIS PROSPECTUS AND “ITEM 1A – RISK FACTORS” OF OUR MOST RECENT REPORT ON FORM 10-K OR 10-Q THAT IS INCORPORATED BY REFERENCE IN THIS PROSPECTUS BEFORE YOU INVEST IN OUR SECURITIES.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.**

**The date of this prospectus is August 9, 2024.**

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## ABOUT THIS PROSPECTUS

This prospectus is part of an automatic shelf registration statement that we filed with the Securities and Exchange Commission, or the SEC, as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act. Under this shelf registration process, we may, from time to time, sell any combination of the securities described in this prospectus in one or more offerings. There is no limit on the aggregate amount of the securities that we may offer pursuant to the registration statement of which this prospectus forms a part. This prospectus provides you with a general description of the securities we may offer.

Each time we sell securities, we will provide one or more prospectus supplements that will contain specific information about the terms of the offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings, hereinafter referred to as an issuer free writing prospectus. The prospectus supplement and any issuer free writing prospectus may also add to, update or change information contained in the prospectus and, accordingly, to the extent inconsistent, information in this prospectus is superseded by the information in the prospectus supplement or the issuer free writing prospectus, as applicable. You should carefully read this prospectus, any prospectus supplement, and any issuer free writing prospectus, together with the additional information described under the heading “Information Incorporated by Reference.”

The prospectus supplement to be attached to the front of this prospectus may describe, as applicable, the terms of the securities offered; the initial price to the public; the price paid for the securities; net proceeds; and the other specific terms related to the offering of the securities.

### **THIS PROSPECTUS MAY NOT BE USED TO OFFER AND SELL SECURITIES UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.**

You should only rely on the information contained or incorporated by reference in this prospectus and any prospectus supplement or issuer free writing prospectus relating to a particular offering. No person has been authorized to give any information or make any representations in connection with this offering other than those contained or incorporated by reference in this prospectus, any accompanying prospectus supplement and any related issuer free writing prospectus in connection with the offering described herein and therein, and, if given or made, such information or representations must not be relied upon as having been authorized by us. Neither this prospectus nor any prospectus supplement nor any related issuer free writing prospectus shall constitute an offer to sell or a solicitation of an offer to buy offered securities in any jurisdiction in which it is unlawful for such person to make such an offering or solicitation. This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits.

You should read the entire prospectus and any prospectus supplement and any related issuer free writing prospectus, as well as the documents incorporated by reference into this prospectus or any prospectus supplement or any related issuer free writing prospectus, before making an investment decision. Neither the delivery of this prospectus or any prospectus supplement or any issuer free writing prospectus nor any sale made hereunder shall under any circumstances imply that the information contained or incorporated by reference herein or in any prospectus supplement or issuer free writing prospectus is correct as of any date subsequent to the date hereof or of such prospectus supplement or issuer free writing prospectus, as applicable. You should assume that the information appearing in this prospectus, any prospectus supplement, any issuer free writing prospectus, or any document incorporated by reference is accurate only as of the date of the applicable documents, regardless of the time of delivery of this prospectus or any sale of securities. Our business, financial condition, results of operations and prospects may have changed since that date.

## PROSPECTUS SUMMARY

*This summary highlights selected information that is presented in greater detail elsewhere, or incorporated by reference, in this prospectus. It does not contain all of the information that may be important to you and your investment decision. Before investing in our securities, you should carefully read this entire prospectus, including the matters set forth under the section of this prospectus captioned "Risk Factors" and the financial statements and related notes and other information that we incorporate by reference herein, including our Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q. Unless the context indicates otherwise, references in this prospectus to "Xenon Pharmaceuticals Inc.," "we," "our" and "us" refer, collectively, to Xenon Pharmaceuticals Inc. and its wholly-owned subsidiary.*

### Overview

We are a neuroscience-focused biopharmaceutical company dedicated to discovering, developing, and commercializing innovative therapeutics to improve the lives of people living with neurological and psychiatric disorders. We are advancing a novel product pipeline to address areas of high unmet medical need, including epilepsy and depression.

Our pipeline includes:

- **Azetukalner - Azetukalner (XEN1101)**, our lead Kv7 channel opener, represents the most advanced, clinically validated potassium channel modulator in late-stage clinical development for multiple indications. Azetukalner is a novel, potent Kv7 potassium channel opener being developed for the treatment of epilepsy, including focal onset seizures and primary generalized tonic-clonic seizures, as well as major depressive disorder, and we are exploring applicability in other neuropsychiatric disorders.
- **Next Generation Ion Channel Modulators** - As leaders in the small molecule ion channel space, we continue to leverage our extensive expertise to discover and develop potassium and sodium channel therapeutics. We are evaluating multiple therapeutic candidates targeting Kv7, Nav1.7, and Nav1.1 across various indications.
- **Partnered Program** - We have an ongoing collaboration with Neurocrine Biosciences to develop treatments for epilepsy that includes an exclusive license to NBI-921352 (formerly XEN901), currently in clinical development for an orphan pediatric epilepsy (SCN8A-DEE), as well as an exclusive license to other pre-clinical compounds, including a Nav1.2/1.6 inhibitor in pre-clinical studies as a potential treatment for focal onset seizures.

In addition to current product candidates in development and our partnered program, we intend to expand our pipeline from our internal research efforts and may expand our pipeline through the acquisition or in-licensing of other product candidates.

### 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 one wholly-owned subsidiary, Xenon Pharmaceuticals USA Inc., which was incorporated in Delaware on December 2, 2016. Our principal executive offices are located at 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>. The information on, or that can be accessed through, our website is not incorporated by reference into this prospectus and should not be considered to be a part of this prospectus.

"Xenon," the Xenon logo and other trademarks or service marks of Xenon appearing in this prospectus are trademarked and are the property of Xenon Pharmaceuticals Inc. This prospectus contains references to our trademarks and service marks and to those belonging to other entities. 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 Securities We May Offer**

We may offer and sell common shares, preferred shares, warrants and/or units in one or more offerings and in any combination, either individually or as units comprised of one or more of the other classes of securities. This prospectus provides you with a general description of the securities we may offer. A prospectus supplement, which we will provide each time we offer securities, will describe the specific amounts, prices and terms of these securities.

We may sell the securities to or through underwriters, dealers or agents or directly to purchasers or as otherwise set forth in the section of this prospectus captioned "Plan of Distribution." We, as well as any agents acting on our behalf, reserve the sole right to accept and to reject in whole or in part any proposed purchase of securities. Each prospectus supplement will set forth the names of any underwriters, dealers, agents or other entities involved in the sale of securities described in that prospectus supplement and any applicable fee, commission or discount arrangements with them.

### ***Common Shares***

Each holder of one common share is entitled to one vote for each common share on all matters submitted to a vote of the shareholders, including the election of directors. There are no cumulative voting rights. Subject to preferences that may be applicable to any then outstanding preferred shares, holders of common shares are entitled to receive ratably those dividends, if any, as may be declared from time to time by our board of directors out of legally available funds. In the event of our liquidation, dissolution or winding up, holders of 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 preferred shares.

### ***Preferred Shares***

Our board of directors has the authority, without further action by the shareholders, to issue an unlimited number of preferred shares in one or more series. Subject to the provisions of the CBCA, our board of directors has the discretion to determine the rights, preferences, privileges, restrictions and conditions, including, among others, dividend rights, conversion rights, voting rights, redemption rights, and liquidation preference of each series of preferred shares.

Each series of preferred shares will be more fully described in the particular prospectus supplement that will accompany this prospectus, including redemption provisions, rights in the event of our liquidation, dissolution or winding up, dividend and voting rights and rights to convert into common shares. No rights, privileges, restrictions or conditions attached to a series of preferred shares shall confer on a series a priority in respect of dividends or return of capital over any other series of preferred shares that are then outstanding.

If any cumulative dividends or amounts payable on return of capital in respect of a series of preferred shares are not paid in full, all series of the preferred shares participate ratably in respect of accumulated dividends and return of capital.

### ***Warrants***

We may issue warrants for the purchase of common shares or preferred shares. We may issue warrants independently or together with other securities.

### ***Units***

We may issue units comprised of one or more of the other classes of securities issued by us as described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit.

## **RISK FACTORS**

An investment in our securities involves a high degree of risk. The prospectus supplement applicable to each offering of our securities will contain a discussion of the risks applicable to an investment in our securities. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading “Risk Factors” in the applicable prospectus supplement, together with all of the other information contained or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties and assumptions discussed under “Part I—Item 1A—Risk Factors,” of our most recent Annual Report on Form 10-K and in “Part II—Item 1A—Risk Factors” in our most recent Quarterly Report on Form 10-Q, filed subsequent to such Form 10-K that are incorporated herein by reference, as may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future and any prospectus supplement related to a particular offering. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations.

## **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

This prospectus, each prospectus supplement and the information incorporated by reference in this prospectus and each prospectus supplement contain certain statements that constitute forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. The words “aim,” “anticipate,” “assume,” “believe,” “contemplate,” “continue,” “could,” “due,” “estimate,” “expect,” “goal,” “intend,” “may,” “objective,” “plan,” “predict,” “positioned,” “potential,” “seek,” “should,” “target,” “will,” “would” and similar expressions and variations thereof are intended to identify forward-looking statements, but are not the exclusive means of identifying such statements. Those statements appear in this prospectus, any accompanying prospectus supplement and the documents incorporated herein and therein by reference, particularly in the sections captioned “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business” and include statements regarding the intent, belief or current expectations of our management that are subject to known and unknown risks, uncertainties and assumptions. You are cautioned that any such forward-looking statements are not guarantees of future performance and involve risks and uncertainties, and that actual results may differ materially from those projected in the forward-looking statements as a result of various factors.

Forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those described in “Risk Factors”, elsewhere in this prospectus or any applicable prospectus supplement and the documents incorporated by reference in this prospectus. Forward-looking statements are based on our management’s beliefs and assumptions and on information currently available to our management. These statements, like all statements in this prospectus, speak only as of their date, and we undertake no obligation to update or revise these statements in light of future developments, except as required by law.

This prospectus, any accompanying prospectus supplement and the documents incorporated herein and therein by reference may also contain estimates and other information concerning our industry that are based on government and industry publications. This information involves a number of assumptions and limitations, and you are cautioned not to give undue weight to these estimates. These government and industry publications generally indicate that their information has been obtained from sources believed to be reliable.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and although we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted a thorough inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

## **USE OF PROCEEDS**

Specific information about the use of proceeds from the specific issuance of any securities will be set forth in the applicable prospectus supplement.

## 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.

## DESCRIPTION OF SHARE CAPITAL

The description of our share capital is incorporated by reference to Exhibit 4.3 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on [February 29, 2024](#).

## DESCRIPTION OF THE WARRANTS

We may issue warrants to purchase preferred shares or common shares. We may offer warrants separately or together with one or more additional warrants, preferred shares or common shares, or any combination of those securities in the form of units, as described in the applicable prospectus supplement. If we issue warrants as part of a unit, the applicable prospectus supplement will specify whether those warrants may be separated from the other securities in the unit prior to the expiration date of the warrants. The applicable prospectus supplement will also describe the following terms of any warrants:

- the specific designation and aggregate number of, and the offering price at which we will issue, the warrants;
- the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;
- whether the warrants are to be sold separately or with other securities as parts of units;
- whether the warrants will be issued in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any security included in that unit;
- the identity of the warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;
- the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;
- the designation and terms of any equity securities purchasable upon exercise of the warrants;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each security;
- if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;
- the number of common shares or preferred shares that may be purchased upon exercise of a warrant and the exercise price for the warrants;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- information with respect to book entry procedures, if any;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;

- if applicable, a discussion of material U.S. and Canadian federal income tax considerations;
- the anti-dilution provisions, and other provisions for changes to or adjustments in the exercise price, of the warrants, if any;
- the redemption or call provisions, if any, applicable to the warrants;
- any adjustments to the terms of the warrants resulting from the occurrence of certain events or from the entry into or consummation by us of certain transactions;
- any provisions with respect to the holder's right to require us to repurchase the warrants upon a change in control or similar event; and
- any additional terms of the warrants, including procedures and limitations relating to the exchange, exercise and settlement of the warrants.

Holders of warrants will not be entitled:

- to vote or receive dividends;
- receive notice with respect to any meeting of shareholders for the election of our directors or any other matter; or
- exercise any rights as shareholders of us.

This summary of certain provisions of the warrants is not complete. For the terms of a particular series of warrants, you should refer to the prospectus supplement for that series of warrants and the warrant agreement for that particular series.

#### **DESCRIPTION OF THE UNITS**

We may issue units comprising two or more securities described in this prospectus in any combination. The following description sets forth certain general terms and provisions of the units that we may offer pursuant to this prospectus. The particular terms of the units and the extent, if any, to which the general terms and provisions may apply to the units so offered will be described in the applicable prospectus supplement.

Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the unit will have the rights and obligations of a holder of each included security. Units will be issued pursuant to the terms of a unit agreement, which may provide that the securities included in the unit may not be held or transferred separately at any time or at any time before a specified date. A copy of the forms of the unit agreement and the unit certificate relating to any particular issue of units will be filed with the SEC each time we issue units, and you should read those documents for provisions that may be important to you. For more information on how you can obtain copies of the forms of the unit agreement and the related unit certificate, see the section of this prospectus captioned "Where You Can Find More Information."

The prospectus supplement relating to any particular issuance of units will describe the terms of those units, including, to the extent applicable, the following:

- the designation and terms of the units and the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any provision for the issuance, payment, settlement, transfer or exchange of the units or the securities comprising the units;
- a discussion of material U.S. and Canadian federal income tax considerations, if applicable; and
- whether the units will be issued in fully registered or global form.

## PLAN OF DISTRIBUTION

We may sell the securities offered through this prospectus (1) to or through underwriters or dealers, (2) directly to purchasers, including our affiliates, (3) through agents, or (4) through a combination of any these methods. The securities may be distributed at a fixed price or prices, which may be changed, market prices prevailing at the time of sale, prices related to the prevailing market prices, or negotiated prices.

The prospectus supplement relating to any offering will include the following information:

- the terms of the offering;
- the names of any underwriters or agents;
- the name or names of any managing underwriter or underwriters;
- the purchase price of the securities;
- the net proceeds from the sale of the securities;
- any delayed delivery arrangements
- any underwriting discounts, commissions or agency fees and other items constituting underwriters' or agents' compensation;
- any initial price to public;
- any exchanges on which the securities will be listed;
- any discounts or concessions allowed or reallocated or paid to dealers; and
- any commissions paid to agents.

In addition, the manner in which we may sell some or all of the securities covered by this prospectus includes, without limitation, through:

- a block trade in which a broker-dealer will attempt to sell as agent, but may position or resell a portion of the block, as principal, in order to facilitate the transaction;
- purchases by a broker-dealer, as principal, and resale by the broker-dealer for its account;
- ordinary brokerage transactions and transactions in which a broker solicits purchasers; or
- privately negotiated transactions.

We may engage in at-the-market offerings into an existing trading market in accordance with Rule 415(a)(4) in the manner described below under “—At-the-Market Offerings.”

## **Sales through Underwriters or Dealers**

If underwriters are used in the sale, the underwriters will acquire the securities for their own account, including through underwriting, purchase, security lending or repurchase agreements with us. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions. Underwriters may sell the securities in order to facilitate transactions in any of our other securities (described in this prospectus or otherwise), including other public or private transactions and short sales. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise indicated in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them (other than any securities purchased upon exercise of any option to purchase additional securities). In connection with any offering of securities pursuant to this prospectus, underwriters may have an option to purchase additional securities from us. We will provide information regarding any such option to purchase additional securities from us in the applicable prospectus supplement. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers. The prospectus supplement will include the names of the principal underwriters the respective amount of securities underwritten, the nature of the obligation of the underwriters to take the securities and the nature of any material relationship between an underwriter and us.

Some or all of the securities that we offer through this prospectus may be new issues of securities with no established trading market. Any underwriters to whom we sell securities for public offering and sale may make a market in those securities, but they will not be obligated to do so and they may discontinue any market making at any time without notice. Accordingly, we cannot assure you of the liquidity of, or continued trading markets for, any securities offered pursuant to this prospectus.

If dealers are used in the sale of securities offered through this prospectus, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. The prospectus supplement will include the names of the dealers and the terms of the transaction.

## **Direct Sales and Sales through Agents**

We may sell the securities offered through this prospectus directly. In this case, no underwriters or agents would be involved. Such securities may also be sold through agents designated from time to time. The applicable prospectus supplement will name any agent involved in the offer or sale of the offered securities and will describe any commissions payable to the agent by us. Unless otherwise indicated in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. The terms of any such sales will be described in the prospectus supplement.

## **Delayed Delivery Contracts**

If so indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by certain institutions to purchase securities from us pursuant to delayed delivery contracts providing for payment and delivery on the date stated in the prospectus supplement. Each contract will be for an amount not less than, and the aggregate amount of securities sold pursuant to such contracts shall not be less nor more than, the respective amounts stated in the prospectus supplement. Institutions with whom the contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutions, but shall in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except that:

- the purchase by an institution of the securities covered under that contract shall not at the time of delivery be prohibited under the laws of the jurisdiction to which that institution is subject; and
- if the securities are also being sold to underwriters acting as principals for their own account, the underwriters shall have purchased such securities not sold for delayed delivery.

The underwriters and other persons acting as agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

Certain agents, underwriters and dealers, and their associates and affiliates may be customers of, have borrowing relationships with, engage in other transactions with, and/or perform services, including investment banking services, for us or one or more of our respective affiliates in the ordinary course of business.

### **At-the-Market Offerings**

To the extent that we make sales through one or more underwriters or agents in at-the-market offerings, we will do so pursuant to the terms of a sales agency financing agreement or other at-the-market offering arrangement between us, on one hand, and the underwriters or agents, on the other. If we engage in at-the-market sales pursuant to any such agreement, we will issue and sell our securities through one or more underwriters or agents, which may act on an agency basis or a principal basis. During the term of any such agreement, we may sell securities on a daily basis in exchange transactions or otherwise as we agree with the underwriters or agents. Any such agreement will provide that any securities sold will be sold at prices related to the then prevailing market prices for our securities. Therefore, exact figures regarding proceeds that will be raised or commissions to be paid cannot be determined as of the date of this prospectus. Pursuant to the terms of the agreement, we may agree to sell, and the relevant underwriters or agents may agree to solicit offers to purchase, blocks of our common shares or other securities. The terms of any such agreement will be set forth in more detail in the applicable prospectus or prospectus supplement.

### **Market Making, Stabilization, Other Transactions and Settlement**

In order to facilitate the offering of the securities, any underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the securities or any other securities the prices of which may be used to determine payments on such securities. Specifically, any underwriters may over-allot in connection with the offering, creating a short position for their own accounts. In addition, to cover over-allotments or to stabilize the price of the securities or of any such other securities, the underwriters may bid for, and purchase, the securities or any such other securities in the open market. Finally, in any offering of the securities through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. Any such underwriters are not required to engage in these activities and may end any of these activities at any time.

Under Rule 15c6-1 of the Exchange Act, trades in the secondary market generally are required to settle in one business day, unless the parties to any such trade expressly agree otherwise. The applicable prospectus supplement may provide that the original issue date for your securities may be more than two scheduled business days after the trade date for your securities. Accordingly, in such a case, if you wish to trade securities on any date prior to the second business day before the original issue date for your securities, you will be required, by virtue of the fact that your securities initially are expected to settle in more than two scheduled business days after the trade date for your securities, to make alternative settlement arrangements to prevent a failed settlement.

Unless the applicable prospectus supplement states otherwise, each offered security will be a new issue and will have no established trading market, with the exception of our common shares. We may elect to list any offered securities on an exchange. Any underwriters that we use in the sale of offered securities may make a market in such securities, but may discontinue such market making at any time without notice. Accordingly, we cannot assure you of the liquidity of, or continued trading markets for, any securities offered pursuant to this prospectus.

### **Derivative Transactions and Hedging**

We, the underwriters or other agents may engage in derivative transactions involving the securities. These derivatives may consist of short sale transactions and other hedging activities. The underwriters or agents may acquire a long or short position in the securities, hold or resell securities acquired and purchase options or futures on the securities and other derivative instruments with returns linked to or related to changes in the price of the securities. In order to facilitate these derivative transactions, we may enter into security lending or repurchase agreements with the underwriters or agents. The underwriters or agents may effect the derivative transactions through sales of the securities to the public, including short sales, or by lending the securities in order to facilitate short sale transactions by others. The underwriters or agents may also use the securities purchased or borrowed from us or others (or, in the case of derivatives, securities received from us in settlement of those derivatives) to directly or indirectly settle sales of the securities or close out any related open borrowings of the securities.

## **Electronic Auctions**

We may also make sales through the Internet or through other electronic means. Since we may from time to time elect to offer securities directly to the public, with or without the involvement of agents, underwriters or dealers, utilizing the Internet or other forms of electronic bidding or ordering systems for the pricing and allocation of such securities, you should pay particular attention to the description of that system we will provide in a prospectus supplement.

Such electronic system may allow bidders to directly participate, through electronic access to an auction site, by submitting conditional offers to buy that are subject to acceptance by us, and which may directly affect the price or other terms and conditions at which such securities are sold. These bidding or ordering systems may present to each bidder, on a so-called “real-time” basis, relevant information to assist in making a bid, such as the clearing spread at which the offering would be sold, based on the bids submitted, and whether a bidder’s individual bids would be accepted, prorated or rejected.

Upon completion of such an electronic auction process, securities will be allocated based on prices bid, terms of bid or other factors. The final offering price at which securities would be sold and the allocation of securities among bidders would be based in whole or in part on the results of the Internet or other electronic bidding process or auction.

## **General Information**

Agents, underwriters, and dealers may be entitled, under agreements entered into with us, to indemnification by us against certain liabilities, including liabilities under the Securities Act. Our agents, underwriters, and dealers, or their affiliates, may be customers of, engage in transactions with or perform services for us, in the ordinary course of business.

### **MATERIAL INCOME TAX CONSIDERATIONS**

The applicable prospectus supplement may describe material U.S. federal income tax consequences of the acquisition, ownership and disposition of any of the securities offered by such prospectus supplement by an investor who is subject to U.S. federal taxation.

The applicable prospectus supplement may also describe material Canadian federal income tax considerations generally applicable to investors described therein of purchasing, holding and disposing of securities offered by such prospectus supplement, including, in the case of an investor who is not a resident of Canada, Canadian non-resident withholding tax considerations.

You should read the tax discussion in any prospectus supplement with respect to a particular offering and consult your own tax advisors with respect to the specific tax consequences of the acquisition, ownership and disposition of the securities offered by such prospectus supplement, including the applicability and effect of state, local and non-U.S. or Canadian tax laws, as well as U.S. and Canadian federal tax laws.

### **LEGAL MATTERS**

We are being represented by Ropes & Gray LLP, Boston, Massachusetts 02199.

Certain legal matters relating to the securities offered by this prospectus under Canadian laws will be passed upon for us by Blake, Cassels & Graydon LLP, Vancouver, British Columbia. Additional legal matters may be passed on for us, or any underwriters, dealers or agents, by counsel that we will name in the applicable prospectus supplement.

### **EXPERTS**

The consolidated financial statements of Xenon Pharmaceuticals Inc. as of December 31, 2023 and 2022, and for each of the years in the three-year period ended December 31, 2023, and management’s assessment on the effectiveness of internal control over financial reporting as of December 31, 2023, have been incorporated by reference herein in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and other reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act can also be accessed free of charge through the Internet. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. You may also access these filings through our website at [www.xenon-pharma.com](http://www.xenon-pharma.com).

We have filed with the SEC a registration statement under the Securities Act relating to the offering of these securities. The registration statement, including the attached exhibits, contains additional relevant information about us and the securities. This prospectus does not contain all of the information set forth in the registration statement. You can obtain a copy of the registration statement, at prescribed rates, from the SEC as discussed above. The registration statement and the documents referred to below under "Incorporation by Reference" are also available on our Internet website, [www.xenon-pharma.com](http://www.xenon-pharma.com). We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

Forms of any documents establishing the terms of the offered securities are filed as exhibits to the registration statement of which this prospectus forms a part or under cover of a Current Report on Form 8-K and incorporated in this prospectus by reference. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should read the actual documents for a more complete description of the relevant matters.

## INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference much of the information that we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated by reference in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents furnished pursuant to Items 2.02 or 7.01 of any Current Report on Form 8-K and, except as may be noted in any such Form 8-K, exhibits filed on such form that are related to such information), until the offering of the securities under the registration statement of which this prospectus forms a part is terminated or completed:

- our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2023, filed with the SEC on February 29, 2024;
- the portions of our Definitive Proxy Statement on [Schedule 14A](#) (other than information furnished rather than filed) that are incorporated by reference into our Annual Report on Form 10-K, filed with the SEC on April 26, 2024;
- our Quarterly Reports on Form 10-Q for the quarters ended [March 31, 2024](#), and [June 30, 2024](#), filed with the SEC on May 9, 2024, and August 8, 2024, respectively;
- our Current Reports on Form 8-K filed with the SEC on [March 8, 2024](#), [April 19, 2024](#), and [June 5, 2024](#); and
- the description of our common shares contained in our Registration Statement on [Form 8-A](#) as filed with the SEC on October 10, 2014 pursuant to Section 12(b) of the Exchange Act, as supplemented by Exhibit 4.3 to our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, filed with the SEC on February 29, 2024, and any other amendments or reports filed for the purpose of updating such description.

We will provide to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, at no cost to the requester, a copy of any and all of the information that is incorporated by reference in this prospectus.

Requests for such documents should be directed to:

Xenon Pharmaceuticals Inc.  
Attn: Investor Relations  
3650 Gilmore Way  
Burnaby, BC V5G 4W8  
Canada  
(604) 484-3353

You may also access the documents incorporated by reference in this prospectus through our website at [www.xenon-pharma.com](http://www.xenon-pharma.com). Except for the specific incorporated documents listed above, no information available on or through our website shall be deemed to be incorporated in this prospectus or the registration statement of which it forms a part.



**Up to \$400,000,000  
Common Shares**

**PROSPECTUS SUPPLEMENT**

**Jefferies**

**Stifel**

**February 27, 2026**

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**Calculation of Filing Fee Tables**  
**424(b)(5)**  
 (Form Type)  
**Xenon Pharmaceuticals Inc.**  
 (Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial effective date	Filing Fee Previously Paid In Connection with Unsold Securities to be Carried Forward	
<b>Fees to Be Paid</b>	Equity	Common shares, no par value per share	457(o) <sup>(1)</sup>	\$400,000,000	—	\$400,000,000	\$138.10 per \$1,000,000	\$55,240.00 (1)	—	—	—	—
<b>Carry Forward Securities</b>												
<b>Carry Forward Securities</b>	—	—	—	—	—	—	—	—	—	—	—	—
	Total Offering Amounts				\$400,000,000		\$55,240.00 (1)					
	Total Fees Previously Paid						—					
	Total Fee Offsets						—					
	Net Fee Due						\$55,240.00 (1)					

- (1) Calculated in accordance with Rule 457(o), based on the proposed maximum aggregate offering price, and Rule 457(r) under the Securities Act of 1933, as amended (the “Securities Act”). This “Calculation of Filing Fee Table” shall be deemed to update the “Calculation of Filing Fee Tables” in the registrant’s Registration Statement on Form S-3ASR (File No. 333-281451), in accordance with Rules 456(b) and 457(r) under the Securities Act..

