

Confidential Treatment Requested by Plus Therapeutics, Inc.
Pursuant to 17 C.F.R. Section 200.83

As confidentially submitted to the U.S. Securities and Exchange Commission on August 1, 2025.
This draft registration statement has not been publicly filed with the U.S. Securities and Exchange Commission and all information herein remains strictly confidential.
Registration No. 333-

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

Form S-1
REGISTRATION STATEMENT
Under
The Securities Act of 1933

PLUS THERAPEUTICS, INC.
(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

2834
(Primary Standard Industrial
Classification Code Number)

33-0827593
(I.R.S. Employer
Identification Number)

2710 Reed Road, Suite 160
Houston, Texas 77002
(737) 255-7194
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Andrew Sims
Chief Financial Officer
Plus Therapeutics, Inc.
2710 Reed Road, Suite 160
Houston, Texas 77002
(737) 255-7194
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

David E. Danovitch
Aaron M. Schleicher
Sullivan & Worcester LLP
1251 Avenue of the Americas
New York, New York 10020
(212) 660-3060

Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective, as determined by the selling stockholder.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with the provisions of Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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**PRELIMINARY PROSPECTUS
(Subject to Completion, Dated August [●], 2025)**

33,000,000 Shares of Common Stock



This prospectus relates to the offer and sale of up to 33,000,000 shares of our common stock, par value \$0.001 per share, by Lincoln Park Capital Fund, LLC, which we refer to in this prospectus as Lincoln Park or the selling stockholder.

The shares of common stock to which this prospectus relates may be issued by us to Lincoln Park, subject to certain limitations described in this prospectus, pursuant to a purchase agreement, dated as of June 17, 2025 we entered into with Lincoln Park (the "Purchase Agreement"). As of the date of this prospectus, we have received gross proceeds of approximately \$[2.8] million from sales of shares of common stock pursuant to the Purchase Agreement, the resale of which shares were registered pursuant to a separate registration statement on Form S-1 initially filed on June 18, 2025 (as amended, the "Prior Registration Statement"). We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of our common stock by the selling stockholder. However, we may receive up to \$25 million aggregate gross proceeds (the "Initial Available Amount") from sales of common stock to Lincoln Park under the Purchase Agreement and, upon our receipt of gross proceeds equal to the full Initial Available Amount from such sales, the total aggregate dollar amount that will be available to us under the Purchase Agreement will automatically increase by an additional \$25 million aggregate gross proceeds (such additional amount, the "Additional Available Amount"), and thereafter we may receive up to such Additional Available Amount (or up to a total of \$50 million aggregate gross proceeds (the "Total Available Amount")) from sales of common stock to Lincoln Park under the Purchase Agreement. Pursuant to the Purchase Agreement, as consideration for its irrevocable commitment to purchase up to the Initial Available Amount of shares of our common stock at our direction under the Purchase Agreement, we agreed to pay Lincoln Park a commitment fee of \$500,000 (the "Initial Commitment Fee"), on or prior to August 8, 2025 (the "Initial Commitment Fee Trigger Date") in cash or, if we comply with certain requirements set forth in the Purchase Agreement, by issuing shares of our common stock with a per share value calculated in accordance with the Purchase Agreement (such shares, the "Initial Commitment Shares"), or any combination thereof. We [intend to issue] [1,612,903] shares of our common stock with a per share value of \$[0.31] on August 8, 2025 as the Initial Commitment Shares.

We also agreed that, upon our receipt of aggregate gross proceeds equal to the Initial Available Amount (the "Additional Commitment Fee Trigger Date"), as consideration for its irrevocable commitment to purchase up to the Additional Available Amount of shares of our common stock at our direction under the Purchase Agreement, we will then pay Lincoln Park an additional commitment fee of \$500,000 (the "Additional Commitment Fee") in cash or, if we comply with certain requirements set forth in the Purchase Agreement, by issuing shares of our common stock with a per share value calculated in accordance with the Purchase Agreement (such shares, the "Additional Commitment Shares"), or any combination thereof. See "The Lincoln Park Transaction" for a description of the Purchase Agreement and "Selling Stockholder" for additional information regarding Lincoln Park.

The selling stockholder may sell or otherwise dispose of the shares of common stock described in this prospectus in a number of different ways and at varying prices. See "Plan of Distribution" for more information about how the selling stockholder may sell or otherwise dispose of the common stock being registered pursuant to this prospectus. The selling stockholder is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended (the "Securities Act").

The selling stockholder will pay all brokerage fees and commissions and similar expenses in connection with any resale or disposition of the shares of common stock described in this prospectus by the selling stockholder. We will pay the expenses incurred in registering under the Securities Act the offer and sale of the shares of common stock to which this prospectus relates by the selling stockholder, including legal and accounting fees. See "Plan of Distribution".

Our common stock is currently listed on the Nasdaq Capital Market ("Nasdaq") under the symbol "PSTV". On [], 2025, the closing price of our common stock, as reported on Nasdaq, was \$[] per share.

Investing in our securities involves a high degree of risk. These risks are described in the "[Risk Factors](#)" section on page 4 of this prospectus. You should also consider the risk factors described or referred to in any documents incorporated by reference in this prospectus, and in any applicable prospectus supplement, before investing in these securities.

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

The date of this prospectus is [], 2025

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

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ABOUT THIS PROSPECTUS

This prospectus forms part of a registration statement that we filed with the Securities and Exchange Commission (the “SEC”), and that includes exhibits that provide more detail of the matters discussed in this prospectus. You should read this prospectus and the related exhibits filed with the SEC, together with the additional information described under the headings “Where You Can Find More Information” and “Incorporation by Reference” before making your investment decision.

You should rely only on the information provided in this prospectus or in a prospectus supplement or any free writing prospectuses or amendments thereto. Neither we, nor the selling stockholder, have authorized anyone else to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. You should assume that the information in this prospectus is accurate only as of the date hereof. Our business, financial condition, results of operations and prospects may have changed since that date.

Neither we, nor the selling stockholder, are offering to sell or seeking offers to purchase these securities in any jurisdiction where the offer or sale is not permitted. We have not done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities as to distribution of the prospectus outside of the United States.

Unless the context otherwise requires, references in this prospectus to “Plus,” “the Company,” “we,” “us” and “our” refer to Plus Therapeutics, Inc. Our logo and all product names are our common law trademarks. Solely for convenience, trademarks and tradenames referred to in this prospectus 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 that the applicable owner will not assert its rights, to these trademarks and tradenames.

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PROSPECTUS SUMMARY

This summary contains basic information about us and this offering. Because it is a summary, it does not contain all of the information that you should consider before investing. Before you decide to invest in our common stock, you should read this entire prospectus carefully, including the section entitled “Risk Factors,” and any documents incorporated by reference.

Our Business

Overview

Plus Therapeutics is a U.S. pharmaceutical company developing targeted radiotherapeutics with advanced platform technologies for central nervous system (“CNS”) cancers. Our novel radioactive drug formulations, medical devices and therapeutic candidates are designed to deliver safe and effective doses of radiation to tumors. To achieve this, we have developed innovative approaches to drug formulation, including encapsulating radionuclides such as rhenium isotopes with nanoliposomes and microspheres. Our formulations are intended to achieve elevated patient-absorbed radiation doses and extend retention times such that the clearance of the isotope occurs after significant and essentially complete radiation decay, which will contribute and provide less normal tissue/organ exposure and improved safety margins.

Our lead radiotherapeutic candidate, REYOBIQ (rhenium (186Re) obisbameda), is designed specifically for CNS cancers including recurrent glioblastoma, leptomeningeal metastases, and pediatric brain cancers by direct localized delivery utilizing approved standard-of-care tissue access such as with convection-enhanced delivery and intraventricular brain (Ommaya reservoir) catheters. Our acquired radiotherapeutic candidate, Rhenium-188 NanoLiposome Biodegradable Alginate Microsphere is designed to treat many solid organ cancers including primary and secondary liver cancers by intra-arterial injection.

On April 26, 2024, we acquired the cerebrospinal fluid cancer diagnostic portfolio known as the “CNSide Platform” that is currently being utilized in the ReSPECT-LM clinical trial funded by the Cancer Prevention and Research Institute of Texas. We are planning for the CNSide Cerebrospinal Fluid Tumor Cell Enumeration test, which is a laboratory developed test, to be re-introduced to the U.S. market starting in the second half quarter of 2025 after we complete a number of steps related to certifications, state licensure, payor coverages, reimbursement codes and financing.

Corporate Information

In March 2025, we moved our headquarters to Houston, Texas, in proximity to world-class cancer institutions and researchers. Our principal executive offices are located at 2710 Reed Road, Suite 160, Houston, Texas 77051, and our telephone number is (737) 255-7194. We maintain a website at www.plustherapeutics.com. We make available free of charge through our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and amendments to these reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the SEC. These reports and other information are also available, free of charge, at www.sec.gov. Information contained on, or that can be accessed through, the websites referenced in this prospectus are not a part of, or incorporated by reference into, this prospectus.

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THE OFFERING

Shares of our common stock offered by the selling stockholder	Up to 33,000,000 shares of our common stock, subject to certain limitations described in this prospectus, consisting of (a) [31,387,097] shares of common stock which we may issue and sell to Lincoln Park from time to time, at our sole discretion, during the 36-month period that began on the Commencement Date in accordance with the Purchase Agreement, and (b) [1,612,903] shares of common stock, which are the Initial Commitment Shares, for which we received no cash consideration.
Shares of our common stock outstanding prior to this offering (as of July 30, 2025)	99,264,526 shares of our common stock.
Shares of our common stock to be outstanding after this offering	132,264,526 shares of our common stock, assuming the sale of all the shares of common stock registered hereunder to Lincoln Park under the Purchase Agreement. The actual number of shares outstanding after this offering will vary depending upon the actual number of shares we sell to Lincoln Park under the Purchase Agreement after the date of this prospectus.
Use of proceeds	We will receive no proceeds from the sale of shares of our common stock by Lincoln Park in this offering. We may receive, initially, aggregate gross proceeds of up to the Initial Available Amount and, upon receipt of the full amount thereof, additional aggregate gross proceeds of up to the Additional Available Amount (for total aggregate gross proceeds of up to the Total Available Amount) from sales of shares of our common stock we make to Lincoln Park, if any, pursuant to the Purchase Agreement, assuming that we sell the full amount of our common stock that we have the right, but not the obligation to sell to Lincoln Park under the Purchase Agreement. Through August [●], 2025, we have received approximately \$[2.8] million under the Purchase Agreement. Any proceeds that we receive from sales of shares of our common stock to Lincoln Park under the Purchase Agreement will be used for working capital and general corporate purposes and to the extent required, for Make-Whole Repayment (as defined in the “Use of Proceeds” section). See “Use of Proceeds.”
Nasdaq symbol for our common stock	“PSTV”
Risk factors	This investment involves a high degree of risk. See “Risk Factors” beginning on page 4 of this prospectus for a discussion of factors you should carefully consider before deciding to invest in our securities.

Unless otherwise noted, the number of shares of common stock to be outstanding immediately after this offering is based on 99,264,526 shares outstanding as of July 30, 2025 and excludes, as of July 30, 2025:

- 1,230,272 shares of common stock issuable upon exercise of stock options outstanding under our equity incentive plans, with a weighted-average exercise price of \$3.79 per share;

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- 76,025 shares of common stock reserved for future issuance under our 2015 New Employee Incentive Plan;
- 47,742 shares of common stock reserved for future issuance under our 2020 Stock Incentive Plan;
- 398 and 27,792 shares of common stock issuable upon conversion of 1,014 shares of Series B Convertible Preferred Stock and 938 shares of Series C Preferred Stock, respectively;
- 4,341,400 shares of common stock issuable upon exercise of pre-funded or zero strike price warrants to purchase common stock; and
- 3,141,993 shares of common stock issuable upon the exercise of warrants to purchase common stock, with a weighted-average exercise price of \$1.79 per share.

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RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision with respect to our securities, we urge you to carefully consider the risks described below and in the “Risk Factors” sections of our most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, as well as our Current Reports on Form 8-K, filed with the SEC and incorporated by reference in this prospectus, and the other information contained in this prospectus. The risks and uncertainties incorporated by reference into this prospectus or described below are not the only ones we face. Additional risks and uncertainties not presently known or which we consider immaterial as of the date hereof may also materially harm our business and could result in a complete loss of your investment. If any of the matters discussed in the following risk factors were to occur, our business, financial condition, results of operations, cash flows, or prospects could be materially and adversely affected, the market price of our common stock could decline, and you could lose all or part of your investment in our securities.

Risks Related to the Offering

The sale or issuance of our common stock to Lincoln Park may cause dilution to our other stockholders and the sale of the shares of common stock acquired by Lincoln Park, or the perception that such sales may occur, could cause the price of our common stock to fall.

Lincoln Park has committed to purchase up to \$50 million aggregate gross proceeds from sales of common stock (initially \$25 million (the “Initial Available Amount”) and if the full Initial Available Amount is purchased, then immediately and automatically up to an additional \$25 million aggregate gross proceeds) of our common stock under the Purchase Agreement, of which they have previously purchased approximately \$[2.8] million through August [●], 2025. The purchase price for the shares that we may sell to Lincoln Park under the Purchase Agreement remains subject to the pricing formula in the Purchase Agreement and will fluctuate based on the price of our common stock. Depending on market liquidity at the time, any future sales of such shares may cause the trading price of our common stock to fall.

We generally have the right to control the timing and amount of any sales of our shares to Lincoln Park. Additional sales of our common stock, if any, to Lincoln Park will depend upon market conditions, the trading price of our common stock, determinations by us as to the appropriate sources of funding for our company and its operations and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some, or none of the additional shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell additional shares to Lincoln Park or issue Additional Commitment Shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all, some or none of those shares at any time or from time to time in its discretion. Therefore, additional sales and issuances to Lincoln Park by us could result in substantial dilution to the interests of other holders of our common stock. Additionally, the sale or issuances of a substantial number of shares of our common stock to Lincoln Park, or the anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

We may not have access to the full amount available under the Purchase Agreement with Lincoln Park. We may require additional financing to sustain our operations, without which we may not be able to continue operations, and the terms of subsequent financings may adversely impact our stockholders.

We may direct Lincoln Park to purchase up to \$50.0 million worth of shares of our common stock from time to time under the Purchase Agreement over a 36-month period generally in amounts up to 300,000 shares of our common stock, which may be increased in amounts up to 400,000 shares if the last closing sale price for our common stock at the time of the sale is not below \$0.50 and up to a maximum amount of 500,000 shares of our common stock if the last closing sale price for our common stock at the time of sale is not below \$0.75, provided that Lincoln Park’s committed obligation under such single Regular Purchase shall not exceed \$1,000,000. If and

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when we receive \$25.0 million aggregate gross proceeds from sales of common stock to Lincoln Park under the Purchase Agreement, we are also required to pay the Additional Commitment Fee, which we may elect to pay in cash, Additional Commitment Shares or any combination thereof, provided that we can only issue Additional Commitment Shares if we have registered those shares for resale under the Securities Act pursuant to a separate resale registration statement.

Depending on the prevailing market price of our common stock, we may not be able to sell shares to Lincoln Park for the maximum \$50.0 million over the term of the Purchase Agreement, of which Lincoln Park has already purchased approximately \$[2.8] million. We expect to receive on August 7, 2025 the stockholder approval required before issuing more than the Exchange Cap limit of 10,194,593 shares (including the Initial Commitment Shares and Additional Commitment Shares, if applicable), which represents 19.99% of our outstanding shares immediately prior to the execution of the Purchase Agreement.

In addition, Lincoln Park will not be required to purchase any shares of our common stock if such sale would result in Lincoln Park's beneficial ownership exceeding 4.99% of the then outstanding shares of our common stock. Our inability to access a portion or the full amount available under the Purchase Agreement, in the absence of any other financing sources, could have a material adverse effect on our business.

The extent we rely on Lincoln Park as a source of funding will depend on a number of factors, including the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources. If obtaining sufficient funding from Lincoln Park were to prove unavailable or prohibitively dilutive, we will need to secure another source of funding in order to satisfy our working capital needs. Even if we sell the remaining \$[●] million of shares of our common stock remaining available for sale under the Purchase Agreement to Lincoln Park as of August [●], 2025, we may still need additional capital to finance our future production plans and working capital needs, and we may have to raise funds through the issuance of equity or debt securities. Assuming a purchase price of \$[●] (which represents the closing price of our common stock on August [●], 2025), the purchase by Lincoln Park of the entire 33,000,000 shares being registered hereunder, that are available for purchase pursuant to the Purchase Agreement would result in gross proceeds to us of only approximately \$[●] million, which would result in a remaining \$[●] million available under the Purchase Agreement.

Depending on the type and the terms of any financing we pursue, stockholders' rights and the value of their investment in our common stock could be reduced. A financing could involve one or more types of securities including common stock, convertible debt or warrants to acquire common stock. These securities could be issued at or below the then prevailing market price for our common stock. In addition, if we issue secured debt securities, the holders of the debt would have a claim to our assets that would be prior to the rights of stockholders until the debt is paid. Interest on these debt securities would increase costs and negatively impact operating results. If the issuance of new securities results in diminished rights to holders of our common stock, the market price of our common stock could be negatively impacted.

Should the financing we require to sustain our working capital needs be unavailable or prohibitively expensive when we require it, the consequences could be a material adverse effect on our business, operating results, financial condition and prospects.

Our management has broad discretion over the use of the net proceeds from our sale of shares of common stock to Lincoln Park, you may not agree with how we use the proceeds and the proceeds may not be invested successfully.

Our management has broad discretion as to the use of the net proceeds from our sale of shares of common stock to Lincoln Park, and we could use them for purposes other than those currently contemplated. Accordingly, you rely on the judgment of our management with regard to the use of those net proceeds, and you do not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately.

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It is possible that we may invest those net proceeds in a way that does not yield a favorable, or any, return for us. The failure of our management to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flows.

Our stockholders may experience substantial dilution in the value of their investment if we issue additional shares of our capital stock, including in connection with the sale or issuance of our common stock to Lincoln Park, the sale of the shares of common stock acquired by Lincoln Park. Further, sales of our common stock, or the perception that such sales may occur, could cause the price of our common stock to decline.

We may ultimately decide to sell to Lincoln Park all, some, or no additional shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. The purchase price for the shares that we may sell to Lincoln Park under the Purchase Agreement will fluctuate based on the price of our common stock. Depending on market liquidity at the time, sales of such shares may cause the trading price of our common stock to fall. If and when we do sell shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all or some of those shares at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us could result in substantial dilution to the interests of other holders of our common stock. Additionally, the sale of a substantial number of shares of our common stock to Lincoln Park, or the anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

Our charter, as amended, allows us to issue up to 2,000,000,000 shares of our common stock and to issue and designate the rights of, without stockholder approval, and up to 5,000,000 shares of preferred stock. We will need to raise additional capital in order to initiate or complete additional development activities for all of our product candidates, to pursue additional disease indications for our product candidates, or to finance future strategic investments or acquisitions. This in turn may require us to issue a substantial amount of securities. As a result, we may in the future sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock, including at prices that may be lower than the prices paid by existing stockholders, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders, which could result in substantial dilution to the interests of existing stockholders. There can be no assurance that we will be able to attract the capital needed to execute on our business plan and sustain our operations. Moreover, we cannot predict the size of future issuances of our common stock, as well as securities convertible into or exercisable for common stock, or the effect, if any, that future issuances and sales of our securities will have on the market price of our common stock. A substantial majority of the outstanding shares of our common stock, as well as a substantial majority of the shares of common stock issuable upon exercise of outstanding options, are freely tradable without restriction or further registration under the Securities Act. Sales of substantial amounts of our common stock, as well as securities convertible into or exercisable for common stock, including shares issued in connection with an acquisition or securing funds to complete any clinical trial plans, or the perception that such sales could occur, may result in substantial dilution and may adversely affect prevailing market prices for our common stock.

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FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated herein by reference contain forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Statements other than statements of historical fact, which address activities, events or developments that we “intend,” “expect,” “believe,” “anticipate,” “will,” “should,” “would,” “could,” “may,” “designed,” “potential,” “evaluate,” “progressing,” “proceeding,” “exploring,” “hopes,” and similar expressions, or future conditional verbs such as “will,” “should,” “would,” “could” or “may” occur in the future are forward looking statements. Such statements are based upon certain assumptions and assessments made by our management in light of their experience and their perception of historical trends, current conditions, expected future developments and other factors they believe to be appropriate.

These statements include, without limitation, statements regarding: our anticipated expenditures, including research and development, and general and administrative expenses; our strategic collaborations and license agreements, intellectual property, FDA and EMA approvals and interactions and government regulation; the potential size of the market for our product candidates; our research and development efforts; results from our pre-clinical and clinical studies and the implications of such results regarding the efficacy or safety of our product candidates; the safety profile, pathways, and efficacy of our product candidates and formulations; anticipated advantages of our product candidates over other products available in the market and being developed; the populations that will most benefit from our product candidates and indications that will be pursued with each product candidate; anticipated progress in our current and future clinical trials; plans and strategies to create novel technologies; our IP strategy; future development and/or expansion of our product candidates and therapies in our markets; sources of competition for any of our product candidates; our ability to generate product or development revenues and the sources of such revenue; our ability to effectively manage our gross profit margins; our ability to obtain and maintain regulatory approvals; expectations as to our future performance; portions of the “Liquidity and Capital Resources” section of our annual and quarterly reports filed with the SEC; our ability to fully access our equity line with Lincoln Park; our need for additional financing and the availability thereof; our ability to continue as a going concern; our ability to remain listed on the Nasdaq Capital Market; our ability to repay or refinance some or all of our outstanding indebtedness and our ability to raise capital in the future; our ability to transfer the drug product manufacture to a contract drug manufacturing organization; and the potential enhancement of our cash position through development, marketing, and licensing arrangements.

Our actual results may differ, including materially, from those anticipated in these forward-looking statements as a result of various risks and uncertainties. These risks and uncertainties include, but are not limited to, those risks discussed in this prospectus under “Risk Factors,” the risks described under “Part I—Item 1A—Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2024, and under “Part II, Item 1A—Risk Factors” in our Quarterly Reports on Form 10-Q, both of which are incorporated herein by reference. We encourage you to read these risks carefully. We caution you not to place undue reliance on the forward-looking statements contained or incorporated by reference in this prospectus. These forward-looking statements speak only as of the date made. We assume no obligation or undertaking to update any forward-looking statements to reflect any changes in expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based. You should, however, review additional disclosures we make in the reports we file with the SEC.

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THE LINCOLN PARK TRANSACTION

General

On June 17, 2025, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park has agreed to purchase from us up to an aggregate of \$50.0 million of our common stock (subject to certain limitations) from time to time over the term of the Purchase Agreement. Pursuant to the Purchase Agreement, we may receive aggregate gross proceeds up to the Initial Available Amount from sales of common stock to Lincoln Park and, upon our receipt of gross proceeds equal to the full Initial Available Amount from such sales, the total aggregate dollar amount that will be available to us under the Purchase Agreement will automatically increase by the Additional Available Amount, and thereafter we may receive up to such Additional Available Amount (or up to the Total Available Amount) from sales of common stock to Lincoln Park under the Purchase Agreement.

Also on June 17, 2025, we entered into the Registration Rights Agreement pursuant to which we filed with the SEC the registration statement that includes this prospectus to register for resale under the Securities Act the shares of our common stock that have been and may be issued to Lincoln Park under the Purchase Agreement.

This prospectus covers the resale of up to 33,000,000 shares of our common stock that we have reserved for issuance and sale to Lincoln Park under the Purchase Agreement from time to time.

We did not have the right to commence sales of our common stock to Lincoln Park under the Purchase Agreement until the Commencement Date. From and after the Commencement Date, we may, from time to time and at our sole discretion for a period of up to 36 months after the Commencement Date, on any business day that we select on which the closing sale price of our common stock equals or exceeds \$0.10 per share, direct Lincoln Park to purchase in a Regular Purchase up to 300,000 shares of our common stock, which amount may be increased up to 400,000 shares if the last closing sale price for our common stock at the time of the sale is not below \$0.50 and up to a maximum amount of 500,000 shares if the last closing sale price for our common stock at the time of sale is not below \$0.75, subject to a maximum commitment of \$1,000,000 per Regular Purchase. In addition, Lincoln Park has committed to purchase other “accelerated amounts” and/or “additional accelerated amounts” under certain circumstances. We control the timing and amount of any sales of our common stock to Lincoln Park. The purchase price of the shares of our common stock that we may sell to Lincoln Park in Regular Purchases under the Purchase Agreement is based on the market price of our common stock preceding the time of sale as computed under the Purchase Agreement. The purchase price per share will be equitably adjusted as provided in the Purchase Agreement for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction as set forth in the Purchase Agreement. We may at any time in our sole discretion terminate the Purchase Agreement without fee, penalty or cost upon one business day notice. There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement or Registration Rights Agreement, other than a prohibition on any “equity line of credit”, “at-the-market offering” or other similar continuous offering in which we may offer, issue or sell shares of our common stock or securities convertible into shares of our common stock (or any combination of units thereof) at a future determined price, subject to customary exceptions. Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement.

As consideration for Lincoln Park’s commitment to purchase shares of our common stock upon the terms of and subject to satisfaction of the conditions set forth in the Purchase Agreement, we [intend to issue] [1,612,903] shares of our common stock with a per share value of \$[0.31] on August 8, 2025 as the Initial Commitment Shares. The Initial Commitment Shares must be included in a registration statement to be filed with and declared effective by the SEC on or prior to the date the Initial Commitment Fee is due registering under the Securities Act the resale by Lincoln Park of such Initial Commitment Shares. We have also agreed to pay an Additional Commitment Fee of \$500,000, which we may elect to pay in cash, shares of our common stock or any combination thereof, upon our receipt of \$25.0 million aggregate gross proceeds from sales of common stock to Lincoln Park under the Purchase Agreement. Through August [●], 2025, approximately \$[2.8] million of common stock have been sold under the Prior Registration Statement. In the event that part or all of the

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Additional Commitment Fee is paid in Additional Commitment Shares, such Additional Commitment Shares must be included in a registration statement to be filed with and declared effective by the SEC on or prior to the date the Additional Commitment Fee is due registering under the Securities Act the resale by Lincoln Park of such Additional Commitment Shares.

As of July 30, 2025, there were 99,264,526 shares of our common stock outstanding, of which 98,785,360 shares of our common stock were held by non-affiliates. If all of the 33,000,000 shares offered by Lincoln Park under this prospectus were issued and outstanding, such shares would represent approximately 25% of the total number of shares of our common stock outstanding and approximately 25.0% of the total number of outstanding shares held by non-affiliates, in each case as of July 30, 2025. We have filed the registration statement that includes this prospectus so that we may issue to Lincoln Park up to 33,000,000 shares of our common stock from time to time from and after the date of this prospectus through sales under the Purchase Agreement. Depending on the market prices of our common stock at the time we elect to issue and sell such shares to Lincoln Park under the Purchase Agreement, we may need to sell more shares to Lincoln Park than are offered under this prospectus to receive aggregate gross proceeds equal to the Total Available Amount, in which case we must again register for resale under the Securities Act additional shares of our common stock, which could cause additional substantial dilution to our stockholders. The number of shares ultimately offered for resale by Lincoln Park is dependent upon the number of shares we sell to Lincoln Park under the Purchase Agreement. We expect to receive on August 7, 2025 the stockholder approval required before issuing more than the Exchange Cap limit of 10,194,593 shares (including the Initial Commitment Shares and Additional Commitment Shares, if applicable), which represents 19.99% of our outstanding shares immediately prior to the execution of the Purchase Agreement.

The Purchase Agreement also prohibits us from directing Lincoln Park to purchase any shares of common stock if those shares, when aggregated with all other shares then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park having beneficial ownership, at any single point in time, of more than 4.99% of the total outstanding shares of our common stock (the “Beneficial Ownership Cap”), as calculated pursuant to Section 13(d) of the Exchange Act and Rule 13d-3 thereunder.

There are substantial risks to our stockholders as a result of the sale and issuance of common stock to Lincoln Park under the Purchase Agreement. These risks include substantial dilution, significant declines in our stock price and our inability to draw sufficient funds when needed. See “Risk Factors.” The sale of our common stock to Lincoln Park under the Purchase Agreement will not affect the rights or privileges of our other stockholders, except that the economic and voting interests of our existing stockholders will be diluted as a result of any such sale. Although the number of shares of common stock that our other stockholders own will not decrease, the shares of our common stock owned by our other stockholders will represent a smaller percentage of our total outstanding shares after any such sale to Lincoln Park under the Purchase Agreement.

Purchase of Shares of our Common Stock under the Purchase Agreement

Under the Purchase Agreement, so long as the closing sale price of our common stock is not below \$0.10 on a particular Business Day, we may from time to time direct Lincoln Park to purchase up to 300,000 shares of our common stock in a Regular Purchase on such business day (such share amount limitation, the “Regular Purchase Share Limit”), provided, however, that the Regular Purchase may be increased to up to 400,000 shares if the last closing sale price for our common stock at the time of the sale is not below \$0.50 and up to a maximum amount of 500,000 shares of our common stock if the last closing sale price for our common stock at the time of sale is not below \$0.75. In each case, Lincoln Park’s maximum commitment in any single Regular Purchase may not exceed \$1,000,000. The Regular Purchase Share Limit is subject to proportionate adjustment in the event of a reorganization, recapitalization, non-cash dividend, stock split or other similar transaction; provided, that if after giving effect to such full proportionate adjustment, the adjusted Regular Purchase Share Limit would preclude us from requiring Lincoln Park to purchase shares of our common stock at an aggregate purchase price equal to or greater than \$50,000 in any single Regular Purchase, then the Regular Purchase Share Limit will not be fully

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adjusted, but rather the Regular Purchase Share Limit for such Regular Purchase shall be adjusted as specified in the Purchase Agreement, such that, after giving effect to such adjustment, the Regular Purchase Share Limit will be equal to (or as close as can be derived from such adjustment without exceeding) \$50,000.

The purchase price per share for each such Regular Purchase will be equal to 97% of the lower of:

- the lowest sale price for our common stock on the purchase date for such shares of our common stock; and
- the arithmetic average of the three lowest closing sale prices for our common stock during the 10 consecutive business days ending on the business day immediately preceding the purchase date of such shares of our common stock.

In addition to Regular Purchases described above, we may also direct Lincoln Park, on any business day on which we have properly submitted a Regular Purchase notice directing Lincoln Park to purchase the maximum number of shares of our common stock that we are then permitted to include in a single Regular Purchase notice, to purchase an additional amount of our common stock, which we refer to as an Accelerated Purchase, not to exceed the lesser of:

- 30% of the aggregate number of shares of our common stock traded during all or, if certain trading volume or market price thresholds specified in the Purchase Agreement are crossed on the applicable Accelerated Purchase date, which is defined as the next business day following the purchase date for the corresponding Regular Purchase, the portion of the normal trading hours on the applicable Accelerated Purchase date prior to such time that any one of such thresholds is crossed, which period of time on the applicable Accelerated Purchase date we refer to as the Accelerated Purchase Measurement Period; and
- 300% of the number of purchase shares purchased pursuant to the corresponding Regular Purchase.

The purchase price per share for each such Accelerated Purchase will be equal to 96.5% of the lower of:

- the volume weighted average price of our common stock during the Accelerated Purchase Measurement Period on the applicable Accelerated Purchase date; and
- the closing sale price of our common stock on the applicable Accelerated Purchase date.

We may also direct Lincoln Park, not later than 1:00 p.m., Eastern time, on a business day on which an Accelerated Purchase has been completed and all of the shares of our common stock to be purchased thereunder (and under the corresponding Regular Purchase) have been properly delivered to Lincoln Park in accordance with the Purchase Agreement prior to such time on such business day, to purchase an additional amount of our common stock, which we refer to as an Additional Accelerated Purchase, of up to the lesser of:

- 30% of the aggregate number of shares of our common stock traded during a certain portion of the normal trading hours on such Accelerated Purchase date as determined in accordance with the Purchase Agreement, which period of time we refer to as the Additional Accelerated Purchase Measurement Period; and
- 300% of the number of purchase shares purchased pursuant to the Regular Purchase corresponding to the Accelerated Purchase that was completed on such Accelerated Purchase date on which an Additional Accelerated Purchase notice was properly received.

We may, in our sole discretion, submit multiple Additional Accelerated Purchase notices to Lincoln Park prior to 1:00 p.m., Eastern time, on a single Accelerated Purchase date, provided that all prior Accelerated Purchases and Additional Accelerated Purchases (including those that have occurred earlier on the same day) have been completed and all of the shares of our common stock to be purchased thereunder (and under the corresponding Regular Purchase) have been properly delivered to Lincoln Park in accordance with the Purchase Agreement.

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The purchase price per share for each such Additional Accelerated Purchase will be equal to 96.5% of the lower of:

- the volume weighted average price of our common stock during the applicable Additional Accelerated Purchase Measurement Period on the applicable Additional Accelerated Purchase date; and
- the closing sale price of our common stock on the applicable Additional Accelerated Purchase date.

In the case of Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases, the purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the business days used to compute the purchase price.

Other than as described above, there are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Lincoln Park.

Minimum Share Price

Under the Purchase Agreement, we and Lincoln Park may not effect any sales of shares of our common stock under the Purchase Agreement on any purchase date that the closing sale price of our common stock is less than the floor price of \$0.10 per share of common stock, which will be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction. Upon consummation of any such reorganization, recapitalization, non-cash dividend, stock split or other similar transaction, the adjusted floor price per share of common stock will be the lower of (i) the adjusted price and (ii) \$0.50.

Events of Suspension

Events of suspension under the Purchase Agreement include the following:

- The effectiveness of the registration statement of which this prospectus forms a part lapses for any reason (including, without limitation, the issuance of a stop order), or any required prospectus supplement and accompanying prospectus are unavailable for the resale by Lincoln Park of our common stock offered hereby, and such lapse or unavailability continues for a period of 10 consecutive business days or for more than an aggregate of 30 business days in any 365-day period.
- Suspension by our principal market of our common stock from trading for a period of one business day.
- The de-listing of our common stock from the Nasdaq Capital Market, our principal market, provided our common stock is not immediately thereafter trading on the New York Stock Exchange, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the NYSE American, the NYSE Arca, or the OTCQX Best Market or the OTCQB Venture Market operated by OTC Markets Group Inc. (or nationally recognized successor thereto). See the discussion about compliance with Nasdaq listing standards at the bottom of this subsection “—Events of Suspension.”
- The failure of our transfer agent to issue to Lincoln Park shares of our common stock within two business days after the applicable date on which Lincoln Park is entitled to receive such shares of our common stock.
- Any breach of the representations or warranties or covenants contained in the Purchase Agreement or Registration Rights Agreement that has or could have a material adverse effect on us and, in the case of a breach of a covenant that is reasonably curable, that is not cured within five business days.
- Any voluntary or involuntary participation or threatened participation in insolvency or bankruptcy proceedings by or against us.
- If at any time we are not eligible to transfer our common stock electronically.

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- If at any time the Exchange Cap (to the extent applicable under the terms of the Purchase Agreement) is reached and our stockholders have not approved the issuance of common stock in excess of the Exchange Cap in accordance with applicable Nasdaq rules.
- if at any time Lincoln Park's broker is unable to accept shares of our common stock issued under the Purchase Agreement for deposit for reasons not within Lincoln Park's control.

Lincoln Park does not have the right to terminate the Purchase Agreement upon any of the events of suspension set forth above, although the Purchase Agreement would automatically terminate in the event of any voluntary or involuntary participation or threatened participation in insolvency or bankruptcy proceedings by or against us. During an event of suspension, all of which are outside of Lincoln Park's control, we may not direct Lincoln Park to purchase any shares of our common stock under the Purchase Agreement.

Our Termination Rights

We have the unconditional right, at any time, for any reason and without any payment or liability to us, to give notice to Lincoln Park to terminate the Purchase Agreement.

No Short-Selling or Hedging by Lincoln Park

Lincoln Park has agreed that neither it nor any of its affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

Prohibitions on Substantially Similar Transactions

There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement or Registration Rights Agreement other than a prohibition on any "equity line of credit" or other substantially similar continuous transactions in which we may offer, issue or sell shares of our common stock or securities convertible into shares of our common stock (or any combination of units thereof) at a future determined price, subject to customary exceptions.

Effect of Performance of the Purchase Agreement on Our Stockholders

All 33,000,000 shares of our common stock being registered for resale in this offering that we may sell to Lincoln Park under the Purchase Agreement are expected to be freely tradable. It is anticipated that shares registered for resale in this offering will be sold at our sole discretion from time to time from and after the date of this prospectus for a period of 36 months after the Commencement Date. The sale by Lincoln Park of a significant amount of shares of our common stock registered in this offering at any given time could cause the market price of our common stock to decline and to be highly volatile. Sales of our common stock to Lincoln Park, if any, will depend upon market conditions, the trading price of our common stock, determinations by us as to the appropriate source of funding for our company and its operations and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some or none of the shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell shares of our common stock to Lincoln Park, after Lincoln Park has acquired the shares of our common stock, Lincoln Park may resell all, some or none of those shares of our common stock at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our common stock. In addition, if we sell a substantial number of shares of our common stock to Lincoln Park under the Purchase Agreement, or if investors expect that we will do so, the actual sales of shares of our common stock or the mere existence of our arrangement with Lincoln Park may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales. However, we have the right to control the timing and amount of any sales of our common stock to Lincoln Park and the Purchase Agreement may be terminated by us at any time without any cost to us.

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Pursuant to the terms of the Purchase Agreement, we have the right, but not the obligation, from time to time to direct Lincoln Park to purchase up to \$50.0 million of our common stock, of which \$[●] million remains to be purchased under the Purchase Agreement (exclusive of the Initial Commitment Shares and Additional Commitment Shares, if applicable, issuable to Lincoln Park), of which initially \$25 million and if the full \$25 million is purchased, then immediately and automatically up to an additional \$25 million aggregate gross proceeds. Depending on the price per share at which we sell our common stock to Lincoln Park pursuant to the Purchase Agreement, we may need to sell to Lincoln Park more shares of our common stock than are offered under this prospectus in order to receive aggregate gross proceeds equal to the approximately \$[●] million remaining balance of the \$50.0 million total commitment available to us under the Purchase Agreement. If we choose to do so, we must again register for resale under the Securities Act such additional shares of our common stock, which could cause additional substantial dilution to our stockholders. The number of shares ultimately offered for resale by Lincoln Park under this prospectus is dependent upon the number of shares we direct Lincoln Park to purchase under the Purchase Agreement. We expect to receive on August 7, 2025 the stockholder approval required before issuing more than the Exchange Cap limit of 10,194,593 shares (including the Initial Commitment Shares and Additional Commitment Shares, if applicable), which represents 19.99% of our outstanding shares immediately prior to the execution of the Purchase Agreement.

We have filed the registration statement that includes this prospectus so that we may issue to Lincoln Park up to 33,000,000 shares of our common stock, consisting of up to [31,387,097] shares of our common stock from time to time from and after the date of this prospectus through sales under the Purchase Agreement and [1,612,903] shares of our common stock that are the Initial Commitment Shares, for which we received no cash consideration. The following table sets forth the amount of gross proceeds we may receive from Lincoln Park from our sale of up to [31,387,097] shares of our common stock that we may issue and sell to Lincoln Park in the future under the Purchase Agreement assuming that all such common stock is sold at varying purchase prices designated below:

Assumed Average Purchase Price Per Share	Number of shares to be Issued if Full Purchase(1)	Percentage of Outstanding Shares of Common Stock After Giving Effect to the Sales to Lincoln Park(2)	Gross Proceeds from the Future Sale of Shares to Lincoln Park Under the Purchase Agreement(1)
\$0.21	[31,387,097]	25%	\$ [6,591,290]
\$0.46(3)	[31,387,097]	25%	\$ [14,438,065]
\$0.71	[31,387,097]	25%	\$ [22,284,839]
\$0.96	[31,387,097]	25%	\$ [30,131,613]

- (1) Although the Purchase Agreement provides that we may sell up to \$50.0 million of our common stock (provided that full Initial Available Amount is purchased) to Lincoln Park, we are only registering 33,000,000 shares of our common stock for resale under the registration statement of which this prospectus is a part, which may or may not cover all the shares of our common stock we ultimately sell to Lincoln Park under the Purchase Agreement, depending on the purchase price per share. Such shares consist of up to [31,387,097] shares of our common stock from time to time from and after the date of this prospectus through sales under the Purchase Agreement and [1,612,903] shares of our common stock that are the Initial Commitment Shares, for which we received no cash consideration.
- (2) The denominator is based on 99,264,526 shares of our common stock outstanding as of July 30, 2025, adjusted to include the number of shares set forth in the adjacent column which we would have sold to Lincoln Park, assuming the purchase price in the adjacent column, and the issuance of the Initial Commitment Shares. The numerator is based on the number of shares issuable under the Purchase Agreement at the corresponding assumed purchase price set forth in the adjacent column and the number of Initial Commitment Shares, without giving effect to the Beneficial Ownership Cap or the Exchange Cap.
- (3) The closing sale price per share of our common stock on July 30, 2025.

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USE OF PROCEEDS

This prospectus relates to shares of our common stock that may be offered and sold from time to time by Lincoln Park. We will receive no proceeds from the sale of shares of common stock by Lincoln Park in this offering. We may receive up to \$50.0 million in aggregate gross proceeds under the Purchase Agreement, of which \$[●] million remains to be purchased (initially \$25 million and if the full \$25 million is purchased, then immediately and automatically up to an additional \$25 million aggregate gross proceeds), from any sales we make to Lincoln Park pursuant to the Purchase Agreement. Assuming a purchase price of \$[●] (which represents the closing price of our common stock on August [●], 2025), the purchase by Lincoln Park of the entire 33,000,000 shares being registered for resale hereunder, which we have the right but not the obligation to sell to Lincoln Park, would result in gross proceeds to us of approximately \$[●] million, and we estimate approximately \$[●] million of net proceeds, after estimated fees and expenses. See “Plan of Distribution” elsewhere in this prospectus for more information.

On June 17, 2025, we entered into a letter agreement (the “Side Letter”) with certain holders of our warrants issued on March 4, 2025. Pursuant to the Side Letter, among other things, such holders agreed to return the shares and pre-funded warrants issued to them on March 4, 2025 and we agreed to repay the holders holding such securities 115% of the value of such securities, using 90% of the proceeds from any capital raised by us subsequent to July 1, 2025 (the “Make-Whole Repayment”). The total amount of the repayment as of the date of the Side Letter was approximately \$17.3 million.

On July 11, 2025, the Company and certain investors from the March 4, 2025 securities purchase agreement (the “March 2025 Private Placement Purchasers”) party to the Side Letter entered into that certain letter of support (the “Support Letters”) to modify certain portions of the Side Letter as between the Company and each of such March 2025 Private Placement Purchasers. In the event that the Company reasonably believes that, within the 30 days (the “Modification Period”) prior to the end of any fiscal quarter, the Company will have stockholders’ equity in an amount below \$3,000,000 as of the end of such fiscal quarter (the “Potential Equity Deficiency”), the Subsequent Financing Percentage (as defined in the Side Letter) shall be modified from 90% to 50% for any Subsequent Financing (as defined in the Side Letter) that occurs during the Modification Period pursuant to the Purchase Agreement. Upon the end of the Modification Period, the Subsequent Financing Percentage shall be reverted to 90%, and such percentage shall apply to all Subsequent Financings, including all Subsequent Financings pursuant to the Purchase Agreement. In the event the Company desires to trigger the modification of the Subsequent Financing Percentage, the Company agrees to supply the purchaser who executed a Support Letter with a pro forma balance sheet to evidence its reasonable belief of the Potential Equity Deficiency approximately 30 days prior to each end of fiscal quarter once the books for prior months are closed. The Company also agreed to make a cash payment of \$300,000 (or such lesser amount if a lesser amount is required for such purchaser to have received its Maximum Amount (as defined in the Side Letter) in cash after giving effect to such payment) to such purchaser. Such payment counts as cash received by the purchaser towards its Maximum Amount. Each Support Letter also grants the purchaser party to the letter a participation right in certain future financings of the Company for a period of 12 months.

We expect to use any proceeds that we receive under the Purchase Agreement for working capital and general corporate purposes and, if required, Make-Whole Repayment. The amounts and timing of these expenditures will depend on a number of factors, such as the timing and progress of our research and development efforts, regulatory actions affecting our product candidates and our business, technological advances and the competitive environment for our product candidates. As we are unable to predict the timing or amount of potential issuances of all of the shares being registered hereunder that are issuable to the Purchase Agreement, we cannot specify with certainty all of the particular uses for the net proceeds that we will have from the sale of such shares. Accordingly, our management will have broad discretion in the application of the net proceeds. We may also use a portion of the net proceeds to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. We may use the proceeds for purposes that are not contemplated at the time of this offering.

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Pending use of the net proceeds as described above, we expect to invest the net proceeds in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government. It is possible that no shares will be issued under the Purchase Agreement.

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DILUTION

The sale of our common stock to Lincoln Park pursuant to the Purchase Agreement will have a dilutive impact on our stockholders. In addition, the lower our stock price is at the time we exercise our right to sell shares to Lincoln Park, the more shares of our common stock we will have to issue to Lincoln Park pursuant to the Purchase Agreement and our existing stockholders would experience greater dilution.

After giving effect to the assumed sale of [31,387,097] shares of our common stock to Lincoln Park pursuant to the Purchase Agreement at an assumed sale price of \$0.46 per share of our common stock (which represents the closing price of our common stock on July 30, 2025) and the issuance of [1,612,903] shares of our common stock that are the Initial Commitment Shares to Lincoln Park for no cash consideration and after deducting estimated offering expenses payable by us, our as-adjusted net tangible book value as of June 30, 2025 would have been approximately \$[●] million, or \$[●] per share. This represents an immediate increase in net tangible book value of \$[●] per share to existing stockholders and an immediate dilution of \$[●] per share to new investors. The table below illustrates this per share dilution:

Assumed offering price per share	\$[●]
Historical net tangible book value per share as of June 30, 2025	\$[●]
Increase per share attributable to this offering	\$[●]
As adjusted net tangible book value per share after this offering	<u>\$[●]</u>
Dilution per share to new investors	<u>\$[●]</u>

The number of shares of common stock to be outstanding immediately after this offering in the table above is based on 92,180,007 shares outstanding as of June 30, 2025 and excludes, as of June 30, 2025:

- 1,230,272 shares of common stock issuable upon exercise of stock options outstanding under our equity incentive plans, with a weighted-average exercise price of \$3.79 per share;
- 76,025 shares of common stock reserved for future issuance under our 2015 New Employee Incentive Plan;
- 47,742 shares of common stock reserved for future issuance under our 2020 Stock Incentive Plan;
- 398 and 27,792 shares of common stock issuable upon conversion of 1,014 shares of Series B Convertible Preferred Stock and 938 shares of Series C Preferred Stock, respectively; and
- 10,676,486 shares of common stock issuable upon exercise of pre-funded or zero strike price warrants to purchase common stock; and
- 3,883,833 shares of common stock warrants that can be exercised into 3,883,833 shares of common stock, with a range of exercise prices of \$1.772 to \$1.980 per share.

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THE SELLING STOCKHOLDER

This prospectus relates to the possible resale by the selling stockholder, Lincoln Park, of shares of our common stock that have been and may be issued to Lincoln Park pursuant to the Purchase Agreement. We are filing the registration statement that includes this prospectus pursuant to the provisions of the Registration Rights Agreement, which we entered into with Lincoln Park on June 17, 2025, concurrently with our execution of the Purchase Agreement, in which we agreed to provide certain registration rights with respect to sales by Lincoln Park of the shares of our common stock that have been and may be issued to Lincoln Park under the Purchase Agreement.

Lincoln Park, as the selling stockholder, may, from time to time, offer and sell pursuant to this prospectus up to 33,000,000 shares of our common stock that we may have issued or may sell to Lincoln Park under the Purchase Agreement. The selling stockholder may sell some, all, or none of its shares of common stock. We do not know how long the selling stockholder will hold the shares of our common stock before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholder regarding the sale of any of the shares of common stock. See “Plan of Distribution”.

The table below sets forth, to our knowledge, information concerning the beneficial ownership of shares of our common stock by the selling stockholder as of July 30, 2025. The percentages of shares owned before and after the offering are based on 99,264,526 shares of our common stock outstanding as of July 30, 2025. The information in the table below with respect to the selling stockholder has been obtained from the selling stockholder.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to shares. Unless otherwise indicated below, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of common stock. The inclusion of any shares in this table does not constitute an admission of beneficial ownership for the person named below.

Throughout this prospectus, when we refer to the shares of common stock being offered for resale by the selling stockholder through this prospectus, we are referring to the shares of common stock that have been and may be issued and sold by us to Lincoln Park pursuant to the Purchase Agreement, unless otherwise indicated.

Name of Selling Stockholder	Number of Shares of Common Stock Owned Prior to Offering(2)		Maximum Number of Shares of Common Stock to be Offered Pursuant to this Prospectus(3)	Number of Shares of Common Stock Owned After Offering	
	Number	Percent		Number	Percent
	[]	[]%		[]	[]%
Lincoln Park Capital Fund, LLC(1)	[]	[]%	33,000,000	[]	[]%

- (1) Josh Scheinfeld and Jonathan Cope, the Managing Members of Lincoln Park Capital, LLC, the manager of Lincoln Park Capital Fund, LLC, are deemed to be beneficial owners of all of the shares of Class A common stock owned directly by Lincoln Park Capital Fund, LLC. Messrs. Cope and Scheinfeld have shared voting and investment power over the shares of Class A common stock being offered under the registration statement filed with the SEC in connection with the transactions contemplated under the Purchase Agreement and the Registration Rights Agreement. Neither Lincoln Park Capital, LLC nor Lincoln Park Capital Fund, LLC is a licensed broker dealer or an affiliate of a licensed broker dealer.
- (2) In accordance with Rule 13d-3(d) under the Exchange Act, we have excluded from the number of shares of our common stock beneficially owned prior to the offering (i) all of the shares of our common stock that we may issue and sell to Lincoln Park pursuant to the Purchase Agreement that are being registered for resale under the registration statement that includes this prospectus, because the issuance and sale of such shares to

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Lincoln Park under the Purchase Agreement is solely at our discretion and is subject to certain conditions, the satisfaction of all of which are outside of Lincoln Park's control, including the registration statement that includes this prospectus becoming and remaining effective under the Securities Act, and (ii) any Additional Commitment Shares, because such Additional Commitment Shares are only issuable to Lincoln Park if we elect to pay some or all of the \$500,000 additional commitment fee, which will only become payable if and when we receive \$25.0 million aggregate gross proceeds from sales of common stock to Lincoln Park under the Purchase Agreement, in shares of our common stock. The [●] shares listed as beneficially owned represent shares held by Lincoln Park. Furthermore, under the terms of the Purchase Agreement, issuances and sales of shares of our common stock to Lincoln Park under the Purchase Agreement are subject to certain limitations on the amounts we may sell to Lincoln Park at any time, including the Beneficial Ownership.

- (3) Although the Purchase Agreement provides that we may sell up to \$50.0 million (initially \$25 million and if the full \$25 million is purchased, then immediately and automatically up to an additional \$25 million aggregate gross proceeds) of our common stock to Lincoln Park, we are only registering 33,000,000 shares of our common stock for resale under this prospectus. Depending on the price per share at which we sell our common stock to Lincoln Park pursuant to the Purchase Agreement, we may need to sell to Lincoln Park under the Purchase Agreement more shares of our common stock than are offered under this prospectus in order to receive aggregate gross proceeds equal to the full \$50.0 million available to us under the Purchase Agreement. If we choose to do so, we must again register for resale under the Securities Act such additional shares. The number of shares ultimately offered for resale by Lincoln Park is dependent upon the number of shares we sell to Lincoln Park under the Purchase Agreement.

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MARKET PRICE OF OUR COMMON STOCK AND RELATED STOCKHOLDER MATTERS

Market Information

Our common stock is traded on the Nasdaq Capital Market under the symbol “PSTV”.

Holders

As of July 30, 2025, there were approximately 17 registered holders of our common stock. This number does not include stockholders for whom shares were held in “nominee” or “street name.”

Dividend Policy

We have never declared or paid any cash dividends on our common stock and we do not intend to pay cash dividends in the foreseeable future. We currently expect to retain any future earnings to fund the operation and expansion of our business.

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DESCRIPTION OF CAPITAL STOCK

This section describes the general terms and provisions of the shares of our common stock, par value \$0.001 per share, and preferred stock, par value \$0.001 per share, and some of the provisions of our certificate of incorporation and bylaws and of the Delaware General Corporation Law (the "DGCL"). This description is only a summary. Our amended and restated certificate of incorporation, as amended, and our amended and restated bylaws have been filed as exhibits to our periodic reports filed with the SEC, which are incorporated by reference in this prospectus. You should read our amended and restated certificate of incorporation and our amended and restated bylaws for additional information before you buy any of our common stock, preferred stock or other securities. See "Where You Can Find More Information."

Common Stock

We are authorized to issue 2,000,000,000 shares of common stock. As of July 30, 2025, there were 99,264,526 shares of common stock issued and outstanding. Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. We have not provided for cumulative voting for the election of directors in our amended and restated certificate of incorporation, as amended. This means that the holders of a majority of the shares voted can elect all of the directors then standing for election. Subject to preferences that may apply to shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive dividends out of assets legally available at the times and in the amounts that our board of directors may determine from time to time. Upon our liquidation, dissolution or winding-up, the holders of common stock are entitled to share ratably in all assets remaining after payment of all liabilities and the liquidation preferences of any outstanding preferred stock. Holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and nonassessable, and the shares of common stock offered, when issued, will be fully paid and nonassessable.

Preferred Stock

We are authorized to issue 5,000,000 shares of preferred stock, 1,952 shares of which were issued and outstanding as of July 30, 2025. Of this amount, there were 938 outstanding shares of Series C Preferred Stock that can be converted into an aggregate of 27,792 shares of common stock, and 1,014 shares of Series B Convertible Preferred Stock that can be converted into an aggregate of 398 shares of common stock.

We may issue additional shares of preferred stock, in series, with such designations, powers, preferences and other rights and qualifications, limitations or restrictions as our board of directors may authorize, without further action by our stockholders, including:

- the distinctive designation of each series and the number of shares that will constitute the series;
- the voting rights, if any, of shares of the series and the terms and conditions of the voting rights;
- the dividend rate on the shares of the series, the dates on which dividends are payable, any restriction, limitation or condition upon the payment of dividends, whether dividends will be cumulative, and the dates from and after which dividends shall accumulate;
- the prices at which, and the terms and conditions on which, the shares of the series may be redeemed, if the shares are redeemable;
- the terms and conditions of a sinking or purchase fund for the purchase or redemption of shares of the series, if such a fund is provided;
- any preferential amount payable upon shares of the series in the event of the liquidation, dissolution or winding up of, or upon the distribution of any of our assets; and

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- the prices or rates of conversion or exchange at which, and the terms and conditions on which, the shares of the series may be converted or exchanged into other securities, if the shares are convertible or exchangeable.

The particular terms of any additional series of preferred stock, and the transfer agent and registrar for that series, will be described in a prospectus supplement. Any material United States federal income tax consequences and other special considerations with respect to any preferred stock offered under this prospectus will also be described in the applicable prospectus supplement.

The issuance of preferred stock could decrease the amount of earnings and assets available for distribution to holders of our common stock or adversely affect the rights and powers, including voting rights, of the holders of our common stock. The issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our company, which could depress the market price of our common stock.

Series B Preferred Stock

Conversion. Each share of Series B Preferred Stock is convertible, at our option or at the option of the holder, at any time, into the number of shares of our common stock determined by dividing the \$1,000 stated value per share of the Series B Preferred Stock by a conversion price of \$2,547.74 per share. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series B Preferred Stock will not have the right to convert any portion of the Series B Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

Fundamental Transactions. In the event we effect certain mergers, consolidations, sales of substantially all of our assets, tender or exchange offers, reclassifications or share exchanges in which our common stock is effectively converted into or exchanged for other securities, cash or property, we consummate a business combination in which another person acquires 50% of the outstanding shares of our common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by our issued and outstanding common stock, then, upon any subsequent conversion of the Series B Preferred Stock, a holder of the Series B Preferred Stock will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon conversion in full of the Series B Preferred Stock.

Dividends. Holders of Series B Preferred Stock are entitled to receive dividends (on an as-if-converted-to-common-stock basis) in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of common stock.

Voting Rights. Except as otherwise provided in the certificate of designation for the Series B Preferred Stock or as otherwise required by law, the Series B Preferred Stock has no voting rights.

Liquidation Preference. Upon our liquidation, dissolution or winding-up, whether voluntary or involuntary, holders of Series B Preferred Stock will be entitled to receive out of our assets, whether capital or surplus, an amount equal to the \$1,000 stated value per share for each share of Series B Preferred Stock before any distribution or payment shall be made to the holders of any junior securities.

Redemption Rights. We are not obligated to redeem or repurchase any shares of Series B Preferred Stock. Shares of Series B Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous fund provisions.

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Series C Preferred Stock

Conversion. Each share of Series C Preferred Stock is convertible, at our option at any time, subject to certain conditions, or at the option of the holder at any time, into the number of shares of our common stock determined by dividing the \$1,000 stated value per share of the Series C Preferred Stock by a conversion price of \$33.75. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series C Preferred Stock does not have the right to convert any portion of the Series C Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

Anti-Dilution. Subject to certain exceptions contained in the certificate of designation for the Series C Preferred Stock, including our ability to issue securities in connection with equity awards to service providers, strategic transactions, debt financings, research and development partnerships, an equity line of credit, our “at the market” equity offering program and other customary exceptions, if we issue or sell, or are deemed to have issued or sold, any shares of common stock or Common Stock Equivalents (as defined in the certificate of designation) for a consideration per share lower than the conversion price of the Series C Preferred Stock in effect immediately prior to such issuance or sale, or deemed issuance or sale, then the conversion price of the Series C Preferred Stock then in effect will be reduced to an amount equal to such lower price pursuant to the terms of the certificate of designation.

Fundamental Transactions. In the event we effect certain mergers, consolidations, sales of substantially all of our assets, tender or exchange offers, reclassifications or share exchanges in which our common stock is effectively converted into or exchanged for other securities, cash or property, we consummate a business combination in which another person acquires 50% of the outstanding shares of our common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by our issued and outstanding common stock, then, upon any subsequent conversion of the Series C Preferred Stock, a holder of the Series C Preferred Stock will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon conversion in full of the Series C Preferred Stock.

Dividends. Holders of Series C Preferred Stock are entitled to receive dividends (on an as-if-converted-to-common-stock basis) in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of common stock.

Voting Rights. Except as otherwise provided in the certificate of designation for the Series C Preferred Stock or as otherwise required by law, the Series C Preferred Stock has no voting rights.

Liquidation Preference. Upon our liquidation, dissolution or winding-up, whether voluntary or involuntary, holders of Series C Preferred Stock will be entitled to receive out of our assets, whether capital or surplus, an amount equal to the \$1,000 stated value per share for each share of Series C Preferred Stock before any distribution or payment shall be made to the holders of any junior securities.

Redemption Rights. We are not obligated to redeem or repurchase any shares of Series C Preferred Stock. Shares of Series C Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous fund provisions.

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Certain provisions of Delaware law, our amended and restated certificate of incorporation, as amended, and our amended and restated bylaws could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types

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of coercive takeover practices and inadequate takeover bids. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to first negotiate with our board of directors.

Certificate of Incorporation and Bylaws. Our amended and restated certificate of incorporation, as amended, and amended and restated bylaws include provisions that:

- authorize the board of directors to issue, without stockholder approval, blank-check preferred stock with such designations, powers, preferences and other rights and qualifications, limitations or restrictions as our board of directors may authorize, which preferred stock could decrease the amount of earnings and assets available for distribution to holders of our common stock or adversely affect the rights and powers, including voting rights, of the holders of our common stock;
- establish advance notice requirements for stockholder nominations of directors and for stockholder proposals that can be acted on at stockholder meetings;
- limit who may call stockholder meetings;
- require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even if less than a quorum; and
- authorize us to indemnify officers and directors against losses that they may incur in investigations and legal proceedings resulting from their services to us, which may include services in connection with takeover defense measures.

Delaware anti-takeover statute. We are subject to Section 203 of the DGCL, which prohibits persons deemed to be “interested stockholders” from engaging in a “business combination” with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an “interested stockholder” is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation’s voting stock. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors. A Delaware corporation may “opt out” of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a stockholders’ amendment approved by at least a majority of the outstanding voting shares. We have not opted out of these provisions. As a result, mergers or other takeover or change in control attempts of us may be discouraged or prevented.

Undesignated Preferred Stock

The ability of our Board, without action by the stockholders, to issue undesignated shares of preferred stock with voting or other rights or preferences as designated by our Board could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Authorized Common Stock

Our authorized but unissued shares of common stock will be available for future issuance without stockholder approval. These additional shares may be utilized for a variety of corporate purposes, including future public offerings to raise additional capital and corporate acquisitions. The existence of authorized but unissued shares of common stock could render more difficult or discourage an attempt to obtain control of a majority of our common stock by means of a proxy contest, tender offer, merger or otherwise.

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Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our amended and restated bylaws will provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at any meeting of stockholders. Our amended and restated bylaws also will specify certain requirements regarding the form and content of a stockholder's notice. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our meetings of stockholders.

No Cumulative Voting; No Action Without a Meeting; Special Meeting of Stockholders

Stockholders will not be permitted to cumulate their votes for the election of directors. In addition, stockholders will not be able to take action by written consent and will only be able to take action at annual or special meetings of our stockholders. Furthermore, special meetings of our stockholders may be called only by our Chief Executive Officer, our President, our Board or its Chairman.

Exclusive Forum Selection

Our amended and restated bylaws require, to the fullest extent permitted by law, subject to limited exceptions, that derivative actions brought in our name, actions against directors, officers and employees for breach of fiduciary duty and other similar actions may be brought only in the Court of Chancery in the State of Delaware and, if brought outside of Delaware, the stockholder bringing the suit will be deemed to have consented to service of process on such stockholder's counsel in any action brought to enforce the exclusive forum provision. Any person or entity purchasing or otherwise acquiring any interest in shares of our capital stock shall be deemed to have notice of and consented to the forum provisions in our amended and restated bylaws.

Our amended and restated bylaws further provide that unless we consent in writing to the selection of an alternative forum, the federal district courts of the United States will be the sole and exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act and the respective rules and regulations promulgated thereunder.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock and each class of preferred stock is Broadridge Corporate Issuer Solutions, Inc. The transfer agent's address is 1717 Arch Street, Suite 1300, Philadelphia, Pennsylvania 19103.

Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol "PSTV".

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PLAN OF DISTRIBUTION

The shares of our common stock offered by this prospectus are being offered by the selling stockholder, Lincoln Park. The shares may be sold or distributed from time to time by the selling stockholder directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the common stock offered by this prospectus could be effected in one or more of the following methods:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers, or underwriters who may act solely as agents;
- "at the market" into an existing market for our common stock;
- in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares of our common stock offered by this prospectus may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares of our common stock offered by this prospectus may not be sold unless they have been registered or qualified for sale in the state or an exemption from the state's registration or qualification requirement is available and complied with.

Lincoln Park is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act.

Lincoln Park has informed us that it intends to use an unaffiliated broker-dealer to effectuate all sales, if any, of our common stock that it may purchase from us pursuant to the Purchase Agreement. Such sales will be made at prices and at terms then prevailing or at prices related to the then current market price. Each such unaffiliated broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. Lincoln Park has informed us that each such broker-dealer will receive commissions from Lincoln Park that will not exceed customary brokerage commissions.

Brokers, dealers, underwriters or agents participating in the distribution of the shares of our common stock offered by this prospectus may receive compensation in the form of commissions, discounts, or concessions from the selling stockholder and/or the purchasers, for whom the broker-dealers may act as agent. The compensation paid to any such particular broker-dealer may be less than or in excess of customary commissions. Neither we nor Lincoln Park can presently estimate the amount of compensation that any agent will receive from the selling stockholder or from any purchasers of shares of our common stock sold by Lincoln Park.

We know of no existing arrangements between Lincoln Park or any other stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the shares of our common stock offered by this prospectus.

We may from time to time file with the SEC one or more supplements to this prospectus or amendments to the registration statement of which this prospectus forms a part to amend, supplement or update information contained in this prospectus, including, if and when required under the Securities Act, to disclose certain information relating to a particular sale of shares of our common stock offered by this prospectus by the selling stockholder, including the names of any brokers, dealers, underwriters or agents participating in the distribution of such shares of our common stock by the selling stockholder, any compensation paid by Lincoln Park to any such brokers, dealers, underwriters or agents, and any other required information.

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We will pay the expenses incident to the registration, offering and sale of the shares of our common stock to Lincoln Park. We have agreed to indemnify Lincoln Park and certain other persons against certain liabilities in connection with the offering of shares of common stock offered by this prospectus, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Lincoln Park has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Lincoln Park specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities.

Lincoln Park has represented to us that at no time prior to the Purchase Agreement has Lincoln Park or its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any short sale (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of our common stock or any hedging transaction, which establishes a net short position with respect to our common stock. Lincoln Park has agreed that during the term of the Purchase Agreement, it and its agents, representatives or affiliates will not enter into or effect, directly or indirectly, any of the foregoing transactions.

We have advised Lincoln Park that it is required to comply with Regulation M promulgated under the Exchange Act. With certain exceptions, Regulation M precludes the selling stockholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the securities offered by this prospectus.

This offering will terminate on the earlier of (i) termination of the Purchase Agreement or (ii) the date that all shares of our common stock offered by this prospectus have been sold by Lincoln Park.

Our common stock is listed on the Nasdaq Capital Market under the symbol "PSTV".

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LEGAL MATTERS

The validity of any securities offered by this prospectus will be passed upon for us by Sullivan & Worcester LLP, New York, New York.

EXPERTS

The consolidated financial statements of Plus Therapeutics, Inc. (the Company) as of December 31, 2024 and 2023 and for each of the years then ended incorporated by reference this Prospectus and in the Registration Statement have been so incorporated in reliance on the report of BDO USA, P.C., an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting. The report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-1 with the SEC under the Securities Act. This prospectus is part of the registration statement but the registration statement includes and incorporates by reference additional information and exhibits. We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC also maintains a web site that contains reports, proxy and information statements and other information regarding companies, such as ours, that file documents electronically with the SEC. The website address is www.sec.gov. The information on the SEC's website is not part of this prospectus, and any references to this website or any other website are inactive textual references only.

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INCORPORATION BY REFERENCE

The SEC permits us to “incorporate by reference” the information contained in documents we have filed with the SEC, which means that we can disclose important information to you by referring you to those documents rather than by including them in this prospectus. Information that is incorporated by reference is considered to be part of this prospectus and you should read it with the same care that you read this prospectus. We have filed with the SEC, and incorporate by reference in this prospectus:

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2024 (filed with the SEC on March 31, 2025);
- the [amendment to our Annual Report](#) on Form 10-K for the year ended December 31, 2024 (filed with the SEC on April 30, 2025);
- our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2025 (filed with the SEC on May 30, 2025);
- our Current Reports on Form 8-K filed with the SEC on [February 18, 2025](#), [March 4, 2025](#), [March 10, 2025](#), [March 27, 2025](#), [April 18, 2025](#), [May 2, 2025](#), [May 19, 2025](#), [May 23, 2025](#), [May 30, 2025](#), [June 6, 2025](#), [June 17, 2025](#), [June 20, 2025](#) and [July 18, 2025](#);
- our definitive proxy statement on [Schedule 14A](#) (filed with the SEC on April 10, 2025) and our definitive proxy statement on Schedule 14A (filed with the SEC on July 21, 2025); and
- the description of our common stock contained in [Exhibit 4.1](#)—Description of Securities to our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, filed with the SEC on March 31, 2025.

We are not, however, incorporating, in each case, any documents or information that we are deemed to furnish and not file in accordance with SEC rules.

Any statement contained in any document incorporated by reference herein will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any prospectus supplement modifies or supersedes such statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any or all documents that are incorporated by reference into this prospectus, but not delivered with the prospectus, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into the documents that this prospectus incorporates. You should direct oral or written requests by one of the following methods. Attention: Investor Relations, Plus Therapeutics, Inc., 2710 Reed Road, Suite 160, Houston, Texas 77051, (737) 255-7194. You may also access these documents, free of charge on the SEC’s website at www.sec.gov or on the “Investors” page of our website at www.plustherapeutics.com. The information found on our website, or that may be accessed by links on our website, is not part of this prospectus. We have included our website address solely as an inactive textual reference. Investors should not rely on any such information in deciding whether to purchase our common stock.

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**DISCLOSURE OF COMMISSION POSITION ON
INDEMNIFICATION FOR SECURITIES ACT LIABILITIES**

Inssofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and controlling persons, we have been informed that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

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33,000,000 Shares of Common Stock



PROSPECTUS

, 2025

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PART II

Information Not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution.

The following is a statement of estimated expenses in connection with the offering described in this registration statement. All expenses incurred with respect to the registration of the common stock will be borne by us. All amounts are estimates except the SEC registration fee.

	<u>Amount</u>
SEC registration fee	\$ [●]
Printing Expenses	\$ 30,000
Legal Fees and Expenses	\$ 35,000
Accounting Fees and Expenses	\$ 25,000
Miscellaneous Expenses	\$ [●]
Total	<u>\$ [●]</u>

Item 14. Indemnification of Directors and Officers.

Section 102 of the Delaware General Corporation Law (the “DGCL”) allows a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except where the director breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of the DGCL or obtained an improper personal benefit.

Section 145 of the DGCL provides, among other things, that we may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding—other than an action by or in our right—by reason of the fact that the person is or was our director, officer, agent or employee, or is or was serving at our request as a director, officer, agent or employee of another corporation, partnership, joint venture, trust or other enterprise against expenses, including attorneys’ fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding. The power to indemnify applies (a) if such person is successful on the merits or otherwise in defense of any action, suit or proceeding, or (b) if such person acting in good faith and in a manner he or she reasonably believed to be in the best interest, or not opposed to the best interest, of us, and with respect to any criminal action or proceeding had no reasonable cause to believe his or her conduct was unlawful. The power to indemnify applies to actions brought by or in our right as well but only to the extent of defense expenses, including attorneys’ fees but excluding amounts paid in settlement, actually and reasonably incurred and not to any satisfaction of judgment or settlement of the claim itself, and with the further limitation that in such actions no indemnification shall be made in the event of any adjudication of liability to us, unless the court believes that in light of all the circumstances indemnification should apply.

Section 174 of the DGCL provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock repurchase or redemption may be held liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time, may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

Our amended and restated certificate of incorporation, as amended, and amended and restated bylaws, filed as Exhibit 3.1 to our Annual Report on Form 10-K filed March 11, 2016 and Exhibit 3.1 to our Periodic Report on Form 8-K filed September 21, 2021, respectively, provide that we shall indemnify our directors, officers,

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employees and other agents to the fullest extent not prohibited by the DGCL or any other applicable law. In addition, we have entered into agreements to indemnify our directors and officers and expect to continue to enter into agreements to indemnify all of our directors and officers. These agreements require us, among other things, to indemnify our directors and officers against certain liabilities which may arise by reason of their status or service as directors or officers to the fullest extent not prohibited by law. These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of our officers and directors for liabilities, including reimbursement of expenses incurred, arising under the Securities Act of 1933.

We maintain insurance policies under which our directors and executive officers are insured, within the limits and subject to the limitations of those policies, against certain expenses in connection with the defense of, and certain liabilities that might be imposed as a result of, actions, suits or proceedings to which they are parties by reason of being or having been directors or officers. The coverage provided by these policies may apply whether or not we would have the power to indemnify such person against such liability under the provisions of the General Corporation Law of the State of Delaware.

Item 15. Recent Sales of Unregistered Securities.

May 2024 Private Placement

In May 2024, we sold (i) an aggregate of 1,439,988 shares of common stock, (ii) up to 2,151,544 shares of common stock issuable upon exercise of the Pre-Funded Warrants, (iii) up to 3,591,532 shares of common stock issuable upon exercise of the Series A Common Stock Warrants, and (iv) up to 3,591,532 shares of common stock issuable upon exercise of the Series B Common Stock Warrants. The combined purchase price for each Private Placement Share and Pre-Funded Warrant from the Initial Subscription was \$2.022, and \$2.158 from the Additional Subscription, in each case together with one accompanying Series A Common Stock Warrant and one accompanying Series B Common Stock Warrant, provided, that the Company Insiders participated in the Initial Subscription at an offering price of \$2.04 per Private Placement Share and accompanying Series A Common Stock Warrant and Series B Common Stock Warrant. The aggregate gross proceeds from the May 2024 PIPE Financing were approximately \$7.25 million, before deducting certain expenses payable by the Company, and excluding the proceeds, if any, from the exercise of the Series A Common Stock Warrant, the Series B Common Stock Warrant, and Pre-Funded Warrant. No underwriters were involved in the foregoing issuances of the securities sold in the May 2024 PIPE Financing. The securities described in this section (a) of Item 15 were sold and issued to the purchasers in reliance upon the exemption from the registration requirements of the Securities Act, as set forth in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder relative to transactions by an issuer not involving any public offering, to the extent an exemption from such registration was required. All of the purchasers in the May 2024 PIPE Financing represented that they were accredited investors and were acquiring the securities for their own account for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investment and could hold the securities for an indefinite period of time and appropriate legends were affixed to the instruments representing such securities issued in the May 2024 PIPE Financing. All purchasers either received adequate information about us or had access, through employment or other relationships, to such information.

February 2025 Private Placement

On February 13, 2025 (the “February 2025 Closing Date”), we entered into a Securities Purchase and Exchange Agreement (the “SPEA”) with certain existing accredited investors (the “SPEA Purchasers”). Pursuant to the SPEA, on the February 2025 Closing Date the Company issued secured convertible promissory notes (the “February 2025 Funding Notes”) in the aggregate principal amount of \$3,362,251 together with common stock purchase warrants (the “February 2025 Warrants”) to purchase 3,002,009 shares of common stock at an exercise price of \$1.12 per share (the “Warrant Exercise Price”). The aggregate purchase price for the February 2025 Funding Note and February 2025 Warrants was approximately \$3.7 million (the “Aggregate Purchase Price”) and included payment of \$0.125 per Warrant in accordance with the Nasdaq Listing Rules.

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The February 2025 Funding Notes mature on February 13, 2026, and bear interest at a rate of 10% per annum, subject to increase upon events of default.

The Warrants are exercisable for five-years from the date of issuance.

In the event of a common stock financing by us on or before March 31, 2025, in which we receive at least \$10.0 million in gross proceeds and that meets certain other conditions specified in the SPEA (a “Qualified Financing”), at the election of the Company, seventy-five percent of the principal amount and interest of the Funding Notes, or at the election of the SPEA Purchasers, all of the principal amount and interest of the Funding Notes, will convert into the securities issued in the Qualified Financing (the “Mandatory Conversion”). The Mandatory Conversion does not apply, however, in the event that per share of common stock price in the Qualified Financing is \$2.00 or greater (the “Maximum Amount”).

Upon a consummation of a Qualified Financing, any portion of the Funding Notes not mandatorily converted in the Qualified Financing by the Company, at each Purchaser’s option, will either be voluntarily converted into such securities issued in the Qualified Financing or redeemed in cash.

Each February 2025 Funding Note is convertible at any time after the February 2025 Closing Date, at the option of each SPEA Purchaser, subject to certain exceptions set forth in the February 2025 Funding Notes, into shares of common stock, or to comply with certain beneficial ownership limitations, into pre-funded warrants exercisable immediately at an exercise price of \$0.001 per share. The initial conversion price for the February 2025 Funding Notes is \$1.12 per share.

On the February 2025 Closing Date, pursuant to the SPEA, the Company issued to the SPEA Purchasers secured convertible promissory notes in the aggregate amount of \$3,188,922 (the “February 2025 Exchange Notes”) in exchange for cancellation of the Series A Common Stock Warrants of the SPEA Purchasers, and the SPEA Purchasers entered into a second amendment to the May 2024 Purchase Agreement to eliminate certain financing restrictions contained therein.

The terms and conditions of the February 2025 Exchange Notes are substantially identical in all material respects to the February 2025 Funding Notes, except that the mandatory conversion applies to all of the principal amount of the February 2025 Exchange Notes instead of being limited to seventy-five percent, and the Maximum Amount does not apply.

No underwriters were involved in the foregoing issuances of the securities sold in the February 2025 PIPE Financing. We issued the February 2025 Exchange Notes in reliance on the exemption from registration afforded by Section 3(a)(9) of the Securities Act. We otherwise sold the securities to “accredited investors,” as that term is defined in the Securities Act, in reliance on the exemption from registration afforded by Section 4(a)(2) thereof and Rule 506 of Regulation D thereunder, and corresponding provisions of state securities or “blue sky” laws. The SPEA Purchasers represented that they were acquiring the securities pursuant to the SPEA for investment only and not with a view towards the resale or distribution thereof in violation of the Securities Act.

March 2025 Private Placement

On March 4, 2025, we entered into a securities purchase agreement (the “March 2025 Securities Purchase Agreement”) with accredited investors, including certain existing stockholders of the Company, identified on the signature page thereto (collectively, the “March 2025 Purchasers”) for a private placement of securities (the “March 2025 Private Placement”) for gross proceeds expected at closing of approximately \$15.0 million. The March 2025 Securities Purchase Agreement, provides for the sale and issuance by the Company of an aggregate of 28,042,140 shares (the “March 2025 Private Placement Shares”) of Common Stock, or, at the election of each March 2025 Purchaser, prefunded warrants to purchase Common Stock (the “Prefunded Warrants”), exercisable immediately at an exercise price of \$0.001 per share (the “Prefunded Warrant Shares”), with each March 2025

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Private Placement Share or Prefunded Warrant accompanied by (i) a Series A common warrant (the “Series A Warrants”) to purchase one share of Common Stock (the “Series A Warrant Shares”), and (ii) one Series B common warrant (the “Series B Warrants”) to purchase one share of Common Stock (the “Series B Warrant Shares,” and together with the Series A Warrant Shares, the “Common Warrant Shares”). The March 2025 Private Placement Shares, Prefunded Warrants, Prefunded Warrant Shares, Series A Warrants, Series B Warrants, and the Common Warrant Shares are collectively referred to herein as the “Securities.” The Company sold the Securities to “accredited investors,” as that term is defined in the Securities Act, in reliance on the exemption from registration afforded by Section 4(a)(2) thereof and Rule 506 of Regulation D thereunder, and corresponding provisions of state securities or “blue sky” laws. The March 2025 Purchasers represented that they were acquiring the Securities for investment only and not with a view towards the resale or distribution thereof in violation of the Securities Act. Accordingly, the Securities have not been registered under the Securities Act and such Securities may not be offered or sold in the United States absent registration or an exemption from registration under the Securities Act and any applicable state securities laws.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

The exhibits to the registration statement are listed in the Exhibit Index to this registration statement and are incorporated herein by reference.

(b) Financial Statement Schedules.

Financial statement schedules

All schedules have been omitted because either they are not required, are not applicable or the information is otherwise set forth in the financial statements and related notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement; and
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

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- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
 - (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
- (5) That, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (6) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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EXHIBIT INDEX

Exhibit Number	Description	Incorporated by Reference			
		Form	File Number	Exhibit	Filing Date
3.1	Composite Certificate of Incorporation.	10-K	001-34375	3.1	03/11/2016
3.2	Certificate of Amendment to Amended and Restated Certificate.	8-K	001-34375	3.1	05/10/2016
3.3	Certificate of Amendment to Amended and Restated Certificate.	8-K	001-34375	3.1	05/23/2018
3.4	Certificate of Amendment to Amended and Restated Certificate.	8-K	001-34375	3.1	07/29/2019
3.5	Certificate of Amendment to Amended and Restated Certificate.	8-K	001-34375	3.1	08/06/2019
3.6	Certificate of Amendment to Amended and Restated Certificate.	8-K	001-34375	3.1	04/28/2023
3.7	Certificate of Amendment to the Certificate of Incorporation, as amended	8-K	001-34375	3.1	05/02/2025
3.8	Amended and Restated Bylaws of Plus Therapeutics, Inc.	8-K	001-34375	3.1	09/21/2021
3.9	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock.	8-K	001-34375	3.1	11/28/2017
3.10	Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock.	8-K	001-34375	3.1	07/25/2018
3.11	Certificate of Designation of Series F Preferred Stock.	8-K	001-34375	3.1	03/03/2023
4.1	Form of Common Stock Certificate.	10-K	001-34375	4.33	03/09/2018
4.2	Form of Pre-Funded Warrant.	8-K	001-34375	4.1	05/09/2024
4.3	Form of Series A Common Warrant.	8-K	001-34375	4.2	05/09/2024
4.4	Form of Series B Common Warrant.	8-K	001-34375	4.3	05/09/2024
4.5	Form of Pre-Funded Warrant	8-K	001-34375	4.1	02/18/2025
4.6	Form of Warrant issued pursuant to the Securities Purchase and Exchange Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc. and the purchasers named therein	8-K	001-34375	4.2	02/18/2025
4.7	Form of Pre-Funded Warrant	8-K	001-34375	4.1	03/04/2025
4.8	Form of Series A Warrant	8-K	001-34375	4.2	03/04/2025
4.9	Form of Series B Warrant	8-K	001-34375	4.3	03/04/2025
4.10	Form of A&R Series B Warrant	8-K	001-34375	4.1	06/17/2025
5.1*	Opinion of Sullivan & Worcester LLP.				
10.1+	Patent and Know-How License Agreement, dated March 29, 2020, by and between Plus Therapeutics, Inc. and NanoTx, Corp.	8-K	001-34375	10.1	03/30/2020

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Exhibit Number	Description	Incorporated by Reference			
		Form	File Number	Exhibit	Filing Date
10.2+	Patent & Technology License Agreement, dated December 31, 2021, by and between Plus Therapeutics, Inc. and the University of Texas Health Science Center at San Antonio.	10-K	001-34375	10.2	02/24/2022
10.3	Equity Distribution Agreement, dated September 9, 2022, by and between Plus Therapeutics, Inc. and Canaccord Genuity LLC.	8-K	001-34375	1.1	09/09/2022
10.4	Purchase Agreement, dated August 2, 2022, by and between Lincoln Park Capital Fund, LLC and Plus Therapeutics, Inc.	8-K	001-34375	10.1	08/08/2022
10.5	Registration Rights Agreement, dated August 2, 2022, by and between Plus Therapeutics, Inc. and Lincoln Park Capital Fund.	8-K	001-34375	10.2	08/08/2022
10.6	LoanAdvance Lending Agreement, dated April 5, 2024, by and between Plus Therapeutics, Inc. and Pershing LLC.	8-K	001-34375	10.1	06/04/2024
10.7	LoanAdvance Interest Rate Form, dated May 24, 2024, by and between Plus Therapeutics, Inc. and Pershing LLC.	8-K	001-34375	10.2	06/04/2024
10.8	Extension of Credit, dated May 29, 2024, by and between Plus Therapeutics, Inc. and Pershing LLC.	8-K	001-34375	10.3	06/04/2024
10.9#	Amended and Restated Employment Agreement, dated March 11, 2020, by and between Marc Hedrick and Plus Therapeutics, Inc.	10-Q	001-34375	10.6	05/16/2020
10.10#	Amended and Restated Employment Agreement, dated March 11, 2020, by and between Andrew Sims and Plus Therapeutics, Inc.	10-Q	001-34375	10.7	05/16/2020
10.11#	2015 New Employee Incentive Plan.	8-K	001-34375	10.1	01/05/2016
10.12#	First Amendment to the Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated January 26, 2017.	10-K	001-34375	10.42	03/24/2017
10.13#	Second Amendment to the Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated February 6, 2020.	10-K	001-34375	10.25	03/30/2020
10.14#	Third Amendment to The Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated June 6, 2024.	S-1	333-280061	10.15	06/07/2024
10.15#	Form of Notice of Grant of Stock Option under the 2015 New Employee Incentive Plan.	S-8	333-210211	99.5	03/15/2016
10.16#	Form of Stock Option Agreement under the 2015 New Employee Incentive Plan.	S-8	333-210211	99.4	03/15/2016
10.17#	Plus Therapeutics, Inc. 2020 Stock Incentive Plan, as amended and restated.	8-K	001-34375	10.1	05/17/2021
10.18#	Form of Notice of Grant and Stock Option Agreement under the 2020 Stock Incentive Plan.	10-K	001-34375	10.26	02/24/2022

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Exhibit Number	Description	Incorporated by Reference			
		Form	File Number	Exhibit	Filing Date
10.19+	Master Services Agreement, dated January 24, 2021, by and between Piramal Pharma Solutions, Inc. and Plus Therapeutics, Inc.	10-K	001-34275	10.24	02/22/2021
10.20#	Form of Indemnification Agreement.	8-K	001-34375	10.1	02/06/2020
10.21#	Form of Agreement for Acceleration and/or Severance.	10-K	001-34375	10.113	03/11/2016
10.22	Cancer Research Grant Contract, effective August 31, 2022, by and between the Cancer Prevention and Research Institute of Texas and Plus Therapeutics, Inc.	8-K	001-34375	10.1	09/22/2022
10.23	Subscription and Investment Representation Agreement, dated March 3, 2023, by and between Plus Therapeutics, Inc. and the purchaser signatory thereto.	8-K	001-34375	10.1	03/03/2023
10.24#	Plus Therapeutics, Inc. 2020 Stock Incentive Plan, as further amended and restated	8-K	001-34375	10.1	04/20/2023
10.25	Securities Purchase Agreement, dated as of May 5, 2024, by and among Plus Therapeutics, Inc. and the purchasers named therein.	8-K	001-34375	10.1	05/09/2024
10.26	First Amendment to Securities Purchase Agreement, dated as of May 8, 2024, by and among Plus Therapeutics, Inc. and the purchasers named therein.	8-K	001-34375	10.2	05/09/2024
10.27	Registration Rights Agreement, dated as of May 5, 2024, by and among Plus Therapeutics, Inc., and the purchases named therein.	8-K	001-34375	10.3	05/09/2024
10.28	Securities Purchase and Exchange Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc. and the purchasers named therein	8-K	001-34375	10.1	02/18/2025
10.29	Form of Secured Convertible Note for Funding Notes issued pursuant to the Securities Purchase and Exchange Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc. and the purchasers named therein	8-K	001-34375	10.2	02/18/2025
10.30	Form of Secured Convertible Note for Exchange Notes issued pursuant to the Securities Purchase and Exchange Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc. and the purchasers named therein	8-K	001-34375	10.3	02/18/2025
10.31	Security Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc., CNSide Diagnostics, LLC, and Iroquois Master Fund Ltd., as collateral agent for the purchasers named therein	8-K	001-34375	10.4	02/18/2025
10.32	Subsidiary Guarantee, dated as of February 13, 2025, by and among CNSide Diagnostics, LLC and the purchasers named therein	8-K	001-34375	10.5	02/18/2025
10.33	Registration Rights Agreement, dated February 13, 2025, by and among Plus Therapeutics, Inc. and the purchasers named therein	8-K	001-34375	10.6	02/18/2025

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Exhibit Number	Description	Incorporated by Reference			
		Form	File Number	Exhibit	Filing Date
10.34	Second Amendment to Securities Purchase Agreement, dated May 5, 2024, as amended on May 9, 2024, by and among Plus Therapeutics, Inc. and the purchasers named therein	8-K	001-34375	10.7	02/18/2025
10.35	Form of Securities Purchase Agreement, dated as of March 4, 2025	8-K	001-34375	10.1	03/04/2025
10.36	Form of Registration Rights Agreement, dated as of March 4, 2025	8-K	001-34375	10.2	03/04/2025
10.37	Form of First Amendment to Securities Purchase and Exchange Agreement, dated as of March 4, 2025	8-K	001-34375	10.3	03/04/2025
10.38	Purchase Agreement between Plus Therapeutics, Inc. and Lincoln Park Capital Fund, LLC, dated as of June 17, 2025.	S-1	333-288121	10.38	06/20/2025
10.39	Registration Rights Agreement between Plus Therapeutics, Inc. and Lincoln Park Capital Fund, LLC, dated as of June 17, 2025.	S-1	333-288121	10.39	06/20/2025
10.40	Form of Side Letter between Plus Therapeutics, Inc. and certain holders of warrants, dated as of June 17, 2025.	8-K	001-34375	10.1	06/17/2025
10.41*	Form of Support Letter, dated July 11, 2025, by and between Plus Therapeutics, Inc. and certain holders				
23.1*	Consent of Independent Registered Public Accounting Firm.				
23.2*	Consent of Sullivan & Worcester LLP (included in Exhibit 5.1 hereto).				
24.1	Power of Attorney.				
107*	Filing Fee Table				

- # Indicates management contract or compensatory plan or arrangement.
+ Portions of this exhibit have been redacted pursuant to Item 601(b)(10)(iv).
* To be filed by amendment.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Houston, State of Texas, on August [●], 2025.

PLUS THERAPEUTICS, INC.

By: _____
Marc H. Hedrick, MD
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Marc H. Hedrick, MD and Andrew Sims, and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and re-substitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments, including post-effective amendments, to this Registration Statement, and any registration statement relating to the offering covered by this Registration Statement and filed pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys in fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Name	Title	Date
_____ Marc H. Hedrick, MD	President and Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	August [●], 2025
_____ Andrew Sims	Chief Financial Officer <i>(Principal Financial Officer and Principal Accounting Officer)</i>	August [●], 2025
_____ Richard J. Hawkins	Chairman of the Board	August [●], 2025
_____ Howard Clowes	Director	August [●], 2025
_____ Kyle Guse	Director	August [●], 2025
_____ An van Es-Johansson, MD	Director	August [●], 2025
_____ Robert Lenk, Ph.D.	Director	August [●], 2025

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*By: _____
Marc H. Hedrick, M.D.
Attorney-in-fact