

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 November 24, 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-

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

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

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**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)

**6420 Levit Green Boulevard, Suite 310**  
**Houston, Texas 77021**  
**(737) 255-7194**  
(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

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**Andrew Sims**  
**Chief Financial Officer**  
**Plus Therapeutics, Inc.**  
**6420 Levit Green Boulevard, Suite 310**  
**Houston, Texas 77021**  
**(737) 255-7194**  
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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*Copies to:*  
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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after this registration statement is declared effective.

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.

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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 November 24, 2025)**



**Up to Shares of Common Stock  
Pre-Funded Warrants to purchase up to Shares of Common Stock**

We are offering up to \_\_\_\_\_ shares of our common stock, at an assumed public offering price of \$ \_\_\_\_\_, which is equal to the closing price per share of our common stock on The Nasdaq Capital Market, on \_\_\_\_\_, 2025, pursuant to this prospectus.

We are also offering to each purchaser whose purchase of shares of our common stock in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the holder, 9.99%) of our outstanding shares of common stock immediately following the consummation of this offering, the opportunity to purchase, if the purchaser so chooses, pre-funded warrants to purchase shares of common stock, or the pre-funded warrants, in lieu of shares of common stock. Each pre-funded warrant will be exercisable for one share of our common stock. Pre-funded warrants will be exercisable upon issuance and will expire when exercised in full. The purchase price of each pre-funded warrant will equal the price per share of common stock being sold to the public in this offering, minus \$0.001, and the exercise price of each pre-funded warrant will be \$0.001 per share. For each pre-funded warrant that we sell, the number of shares of our common stock that we are offering will be decreased on a one-for-one basis. The pre-funded warrants will not be listed on the Nasdaq Capital Market and are not expected to trade in any market, however we anticipate that the shares of our common stock to be issued upon exercise of the pre-funded warrants will trade on the Nasdaq Capital Market. This prospectus also relates to the shares of common stock issuable upon the exercise of the pre-funded warrants.

This offering will terminate on \_\_\_\_\_, unless we decide to terminate the offering (which we may do at any time in our discretion) prior to that date. We will have one closing for all the securities purchased in this offering. The public offering price per share (or pre-funded warrant) will be fixed for the duration of this offering.

We have engaged \_\_\_\_\_, or the placement agent, to act as our exclusive placement agent in connection with this offering. The placement agent has agreed to use its reasonable best efforts to arrange for the sale of the securities offered by this prospectus. The placement agent is not purchasing or selling any of the securities we are offering and the placement agent is not required to arrange the purchase or sale of any specific number or dollar amount of securities. We have agreed to pay to the placement agent the placement agent fees set forth in the table below, which assumes that we sell all of the securities offered by this prospectus. Because we will deliver the securities to be issued in this offering upon our receipt of investor funds, there is no arrangement for funds to be received in escrow, trust or similar arrangement. There is no minimum offering requirement as a condition of closing of this offering. Because there is no minimum offering amount required as a condition to closing this offering, we may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to pursue our business goals described in this prospectus. In addition, because there is no escrow account and no minimum offering amount, investors could be in a position where they have invested in our company, but we are unable to fulfill all of our contemplated objectives due to a lack of interest in this offering. Further, any proceeds from the sale of securities offered by us will be available for our immediate use, despite uncertainty about whether we would be able to use such funds to effectively implement our business plan. See the section entitled “Risk Factors” for more information. We will bear all costs associated with the offering. See “Plan of Distribution” on page 19 of this prospectus for more information regarding these arrangements.

Our common stock is listed on the Nasdaq Capital Market under the symbol “PSTV.” The closing price of our common stock on the Nasdaq Stock Market on \_\_\_\_\_, 2025, was \$ \_\_\_\_\_ per share.

All share and pre-funded warrant numbers are based on an assumed public offering price of \$ \_\_\_\_\_ per share and \$ \_\_\_\_\_ per pre-funded warrant. The actual public offering price per share and the actual public offering price per pre-funded warrant will be determined through negotiation among us, the placement agent and the investors in the offering based on market conditions at the time of pricing, and may be at a discount to the current market price of our common stock. Therefore, the recent market price per share of common stock used throughout this prospectus as an assumed public offering price may not be indicative of the final offering price. There is no established trading market for the pre-funded warrants, and we do not expect a market to develop. We do not intend to apply for a listing of the pre-funded warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the pre-funded warrants will be limited.

**Investing in our securities involves a high degree of risk. These risks are described in the “Risk Factors” section on page 5 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.

	Per Share	Per Pre-Funded Warrant	Total
Public offering price	\$ _____	\$ _____	\$ _____
Placement agent’s fees(1)	\$ _____	\$ _____	\$ _____
Proceeds to us, before expenses(2)	\$ _____	\$ _____	\$ _____

- In addition, we have also agreed to pay the placement agent a management fee of [●]% of the aggregate gross proceeds raised in this offering and to pay the placement agent for certain of its offering-related expenses. In addition, we have agreed to issue the placement agent or its designees, as compensation in connection with this offering, warrants, to purchase a number of shares of common stock equal to [●]% of the shares of common stock sold in this offering (including the shares of common stock issuable upon the exercise of the pre-funded warrants), at an exercise price of \$ \_\_\_\_\_ per share, which represents [●]% of the public offering price per share of common stock. See “Plan of Distribution” for a description of the compensation to be received by the placement agent.
- Because there is no minimum number of securities or amount of proceeds required as a condition to closing in this offering, the actual public offering amount, placement agent fees, and proceeds to us, if any, are not presently determinable and may be substantially less than the total maximum offering amounts set forth above. For more information, see “Plan of Distribution.”

Delivery of the securities offered hereby is expected to be made on or about \_\_\_\_\_, subject to satisfaction of customary closing conditions.

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**

You should read this prospectus and the related exhibits filed with the Securities and Exchange Commission (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 placement agent, 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 placement agent, 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.

**Industry and Market Data**

This prospectus and the documents incorporated by reference contain estimates, projections and other information concerning our industry, our business, the science of our products and the markets for our products, including data regarding the incidence of certain medical conditions and the scientific basis of our products. We obtained the industry, science, market and similar data set forth in this prospectus from our internal estimates and research and from academic and industry research, publications, surveys, and studies conducted by third parties. While we believe that these industry publications and third-party research, surveys and studies are reliable, we have not independently verified such data and we do not make any representation as to the accuracy of the information. The content of the above sources, except to the extent specifically set forth in this prospectus, does not constitute a portion of this prospectus and is not incorporated herein. Information that is based on estimates, forecasts, projections, market research, scientific research, or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information.

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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 radiotherapeutic 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 within 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 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 glioblastoma and liver cancers by intra-arterial injection.

CNSide Diagnostics, LLC is a wholly owned subsidiary of Plus Therapeutics that develops and commercializes proprietary laboratory-developed tests, such as CNSide®, designed to detect, quantify, and characterize tumor cells that have metastasized to the central nervous system in patients with carcinomas and melanomas. The CNSide® CSF Tumor cell Enumeration test enables quantitative analysis of tumor cells in the cerebrospinal fluid that informs and improves the management of patients suspected to have leptomeningeal metastases. We acquired the CNSide CSF Assay Platform on April 26, 2024 and have recently brought the CNSide CSF Tumor Cell Enumeration test back to the U.S. market.

**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 6420 Levitt Green Boulevard, Suite 310, Houston, Texas 77021, and our telephone number is (737) 255-7194. We maintain a website at [www.plustherapeutics.com](http://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](http://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 to be Offered	Up to shares of common stock based on an assumed public offering price of \$ per share of common stock, which is equal to the last sale price of our common stock as reported by Nasdaq on , 2025.
Pre-funded Warrants to be Offered	<p>We are also offering to those purchasers, if any, whose purchase of the common stock in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or at the election of the purchaser, 9.99%) of our outstanding common stock immediately following the consummation of this offering, the opportunity to purchase, if they so choose, pre-funded warrants in lieu of the common stock that would otherwise result in ownership in excess of 4.99% (or 9.99%, as applicable) of our outstanding common stock.</p> <p>The purchase price of each pre-funded warrant will equal the price per share of common stock being sold to the public in this offering, minus \$0.001, and the exercise price of each pre-funded warrant will be \$0.001 per share.</p> <p>For each pre-funded warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis.</p> <p>Each pre-funded warrant will be immediately exercisable and may be exercised at any time until exercised in full. There is no expiration date for the pre-funded warrants. To better understand the terms of the pre-funded warrants, you should carefully read the “Description of Capital Stock” section of this prospectus. You should also read the form of pre-funded warrant, which is filed as an exhibit to the registration statement that includes this prospectus.</p>
Lock-Up Agreements	We and all of our executive officers and directors will enter into lock-up agreements with the placement agent. Under these agreements, we and each of these persons may not, without the prior written approval of the placement agent, offer, sell, contract to sell or otherwise dispose of or hedge common stock or securities convertible into or exchangeable for common stock, subject to certain exceptions. The restrictions contained in these agreements will be in effect for a period of [●] days after the closing of this offering. For more information, see “Plan of Distribution.”
Shares of our common stock outstanding prior to this offering (as of November 20, 2025)	138,129,055 shares of our common stock.
Shares of our common stock to be outstanding after this offering	shares of our common stock (assuming we sell only shares of common stock and no pre-funded warrants).
Use of proceeds	We intend to use the proceeds from this offering for working capital and general corporate purposes. See “Use of Proceeds.”

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Nasdaq symbol for our common stock	“PSTV”
Risk Factors	This investment involves a high degree of risk. See “Risk Factors” beginning on page 5 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 138,129,055 shares outstanding as of November 20, 2025 and excludes, as of November 20, 2025:

- 11,272,863 shares of common stock issuable upon exercise of stock options outstanding under our equity incentive plans, with a weighted-average exercise price of \$0.91 per share;
- 2,823,857 shares of common stock issuable upon vesting of restricted stock units under our equity incentive plans, with a weighted-average grant date fair value of \$0.57 per share.
- 76,025 shares of common stock reserved for future issuance under our 2015 New Employee Incentive Plan;
- 7,181,294 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
- 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 for the fiscal year ended December 31, 2024, which is incorporated by reference in this prospectus, together with the information included in this prospectus and documents incorporated by reference herein, and in any free writing prospectus that we have authorized for use in connection with this offering. 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, as well as the value of the pre-funded warrants, and you could lose all or part of your investment in our securities.*

**Risks Related to the Offering**

***Our management has broad discretion over the use of the net proceeds from this offering, 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 this offering, 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. 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.

***If you purchase our securities in this offering, you will incur immediate and substantial dilution in the book value of your shares of common stock.***

You will suffer immediate and substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the assumed public offering price of \$ \_\_\_\_\_ per share, the last reported price of our common stock on the Nasdaq Capital Market on \_\_\_\_\_, 2025, purchasers of securities in this offering will experience immediate dilution of \$ \_\_\_\_\_ per share in net tangible book value of the common stock. See the section of this prospectus titled “Dilution” for a more detailed description of these factors.

***There is no public market for any pre-funded warrants being offered in this offering.***

There is no established public trading market for the pre-funded warrants being sold in this offering, and we do not expect a market to develop. We will not list the pre-funded warrants on any securities exchange or nationally recognized trading system, including the Nasdaq Capital Market. Without an active market, the liquidity of the pre-funded warrants will be limited.

***Purchasers who purchase our securities in this offering pursuant to a securities purchase agreement may have rights not available to purchasers that purchase without the benefit of a securities purchase agreement.***

In addition to rights and remedies available to all purchasers in this offering under federal securities and state law, purchasers that enter into a securities purchase agreement will also be able to bring claims of breach of contract against us. The ability to pursue a claim for breach of contract provides those investors with the means to enforce the covenants uniquely available to them under the securities purchase agreement including: (i) timely delivery of shares; (ii) agreement to not enter into variable rate financings for \_\_\_\_\_ from closing, subject to certain exceptions; (iii) agreement to not enter into any financings for [●] days from closing, subject to certain exceptions; and (iv) indemnification for breach of contract.

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***This is a best efforts offering, with no minimum amount of securities required to be sold, and we may not raise the amount of capital we believe is required for our business plans, including our near-term business plans, nor will investors in this offering receive a refund in the event that we do not sell an amount of securities sufficient to pursue the business goals outlined in this prospectus.***

The placement agent has agreed to use its reasonable best efforts to solicit offers to purchase the securities in this offering. The placement agent has no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the securities. We may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to support our business goals, continued operations, including our near-term continued operations. Thus, we may not raise the amount of capital we believe is required for our operations in the short-term and may need to raise additional funds to complete such short-term operations. Such additional fundraises may not be available or available on terms acceptable to us, or at all.

There is no required minimum number of securities that must be sold as a condition to completion of this offering, and we have not, nor will we, establish an escrow account in connection with this offering. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth herein. Because there is no escrow account and no minimum offering amount, investors could be in a position where they have invested in us, but we are unable to fulfill our objectives due to a lack of interest in this offering. Further, because there is no escrow account in operation and no minimum investment amount, any proceeds from the sale of securities offered by us will be available for our immediate use, despite uncertainty about whether we would be able to use such funds to effectively implement our business plan. Investor funds will not be returned under any circumstances whether during or after the offering.

***The pre-funded warrants are speculative in nature.***

The pre-funded warrants do not confer any rights of common stock ownership on their holders, such as voting rights or the right to receive dividends, but merely represent the right to acquire shares of common stock at a fixed price. Commencing on the date of issuance, holders of pre-funded warrants may exercise their right to acquire the underlying common stock and pay the stated warrant exercise price per share.

Until holders of pre-funded warrants acquire shares of our common stock upon exercise thereof, holders of such pre-funded warrants will have no rights with respect to shares of our common stock. Upon exercise of the pre-funded warrants, such holders will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

***Raising additional capital may cause dilution to our stockholders, including purchasers of securities in this offering, restrict our operations or require us to relinquish rights to our technologies or current or future therapeutic candidates.***

Until such time, if ever, as we can generate the cash we need from operations, we expect to finance our cash needs through a combination of private and public equity offerings, debt financings, collaborations, strategic alliances and marketing, distribution or licensing arrangements. To the extent that we raise additional capital through the sale of common stock or securities convertible into or exchangeable for common stock, the ownership interest of our shareholders will be diluted, and the terms of these new securities may include liquidation or other preferences that materially adversely affect the rights of our shareholders. Debt financing, if available, would increase our fixed payment obligations and may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

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If we raise funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third-parties, we may have to relinquish valuable rights to our intellectual property, future revenue streams, research programs or current or future therapeutic candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds when needed, we may be required to delay, scale back or discontinue the development and commercialization of one or more of our therapeutic candidates, delay our pursuit of potential licenses or acquisitions, or grant rights to develop and market current or future therapeutic candidates that we would otherwise prefer to develop and market ourselves.

In addition, we have a significant number of stock options, convertible preferred stock and warrants to purchase shares of our common stock outstanding. To the extent that outstanding stock options, convertible preferred stock or warrants have been or may be exercised or other shares issued, you may experience dilution.

**Risks Related to Our Business**

*The diagnostic testing industry is subject to rapid change, which could make our current or future products obsolete.*

The diagnostic testing industry is characterized by rapid changes, including technological and scientific breakthroughs, developments related to application of generative artificial intelligence (“AI”), frequent new product introductions and enhancements and evolving industry standards, all of which could make our current products and the other products we are developing obsolete. The future success of our products will depend on our ability to keep pace with the evolving needs of clinicians and patients on a timely and cost-effective basis and to pursue new market opportunities that develop as a result of scientific and technological advances. In recent years, there have been numerous advances in technologies relating to the diagnosis and treatment of cancer. There have also been advances in methods used to analyze very large amounts of molecular information. We must continuously enhance our existing products and develop new products to keep pace with evolving standards of care. If we do not update our products to reflect new scientific knowledge about cancer biology, information about new cancer therapies or relevant clinical studies, our products could become obsolete and sales of our current products and any new products we develop could decline or fail to grow as expected.

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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 (the “Securities Act”), and Section 21E of the Securities Exchange Act of 1934, as amended (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, U.S. Food and Drug Administration and European Medicines Agency 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; competition future development and/or expansion of our product candidates and therapies in our markets; sources of competition for any of our product candidates; our pipeline; our ability to generate product or development revenues and the sources of such revenue; 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 Report on Form 10-K for the year ended December 31, 2024 filed with the SEC on March 31, 2025; 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; the potential enhancement of our cash position through development, marketing, and licensing arrangements; potential enhancement of our cash position through development, marketing, and licensing arrangements; and a material security breach or cybersecurity attack affecting our operations and property.

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, which is 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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Pursuant to 17 C.F.R. Section 200.83**

**USE OF PROCEEDS**

We estimate that the net proceeds that we will receive from the sale of our common stock in this offering will be approximately \$ \_\_\_\_\_ million, after deducting placement agent's fees and other offering expenses payable by us, assuming a public offering price of \$ \_\_\_\_\_ per share, which is the last reported sale price of our common stock on Nasdaq Capital Market on \_\_\_\_\_, 2025, assuming no sale of pre-funded warrants.

We expect to use any proceeds that we receive from this offering for working capital and general corporate purposes. 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. We cannot specify with certainty all of the particular uses for the net proceeds that we will have from the offering. 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. 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.

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**DILUTION**

If you invest in our securities in this offering, your ownership interest may be diluted immediately to the extent of the difference between the public offering price per share of our common and the as adjusted net tangible book value per share of our common stock immediately after this offering.

Our historical net tangible book value as of September 30, 2025, was \$[●], or \$[●] per share of our outstanding common stock. Our historical net tangible book value represents the amount of our total tangible assets less our total liabilities. Historical net tangible book value per share represents historical net tangible book value divided by the number of shares of our common stock outstanding as of September 30, 2025.

After giving effect to the sale of shares of our common stock at an assumed public offering price of \$ \_\_\_\_\_ per share (which was the last reported sale price of our common stock on Nasdaq on November \_\_\_\_\_, 2025, assuming no sale of any pre-funded warrants, and after deducting placement agent fees and estimated offering expenses payable by us, our as adjusted net tangible book value as of September 30, 2025 would have been \$ \_\_\_\_\_ million, or \$ \_\_\_\_\_ per share. This represents an immediate increase in as adjusted net tangible book value of \$ \_\_\_\_\_ per share to our existing stockholders and an immediate dilution of \$ \_\_\_\_\_ per share to investors purchasing our common stock in this offering at the assumed public offering price. The final public offering price will be determined through negotiation between us, the placement agent and the investors in the offering and may be at a discount to the current market price. Therefore, the assumed public offering price used throughout this prospectus may not be indicative of the final public offering price.

The following table illustrates this dilution on a per share basis:

Assumed public offering price per share of common stock		\$ _____
Historical net tangible book value per share as of September 30, 2025	\$ _____	—
Increase in net tangible book value per share as of September 30, 2025 attributable to investors purchasing shares in this offering		—
As adjusted net tangible book value per share as of September 30, 2025 after giving effect to this offering		_____
Dilution per share to investors participating in this offering		\$ _____

Each \$1.00 increase or decrease in the assumed public offering price of \$ \_\_\_\_\_ per share, the last reported sale price of our common stock on the Nasdaq on \_\_\_\_\_, 2025, would increase or decrease our as adjusted net tangible book value per share after this offering by \$ \_\_\_\_\_ per share. For each \$ \_\_\_\_\_ increase or decrease in the assumed public offering price, the dilution per share to investors participating in this offering would increase or decrease by \$ \_\_\_\_\_ per share, assuming that the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting placement agent fees and commissions and estimated offering expenses payable by us. Similarly, an increase of shares of common stock offered by us would increase the as adjusted net tangible book value after this offering by \$ \_\_\_\_\_ per share and decrease the dilution per share to investors participating in this offering by \$ \_\_\_\_\_ per share, and a decrease of shares of common stock offered by us would decrease the as adjusted net tangible book value by \$ \_\_\_\_\_ per share and increase the dilution per share to investors in this offering by \$ \_\_\_\_\_ per share, assuming that the assumed public offering price remains the same, and after deducting placement agent fees and estimated offering expenses payable by us.

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Unless otherwise noted, the number of shares of common stock to be outstanding immediately after this offering in the table above is based on 131,605,544 shares outstanding as of September 30, 2025, and excludes, as of September 30, 2025:

- 11,272,863 shares of common stock issuable upon exercise of stock options outstanding under our equity incentive plans, with a weighted-average exercise price of \$0.91 per share;
- 2,823,857 shares of common stock issuable upon vesting of restricted stock units under our equity incentive plans, with a weighted-average grant date fair value of \$0.57 per share.
- 76,025 shares of common stock reserved for future issuance under our 2015 New Employee Incentive Plan;
- 7,181,294 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
- 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.

**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.” On \_\_\_\_\_, 2025, the closing price as reported on Nasdaq Capital Market of our common stock was \$ \_\_\_\_\_ per share. There is no established public trading market for the pre-funded warrants, and we do not expect a market to develop. In addition, we do not intend to apply for a listing of the pre-funded warrants on any national securities exchange.

**Holders**

As of [●], 2025, there were approximately [●] 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. Investors should not purchase our common stock with the expectation of receiving cash dividends.

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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, our amended and restated bylaws and the applicable provisions of the DGCL for additional information before you buy any of our 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 November 20, 2025, there were 138,129,055 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 November 20, 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 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.

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*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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**DESCRIPTION OF SECURITIES WE ARE OFFERING**

The following is a summary of the material terms of our common stock. For additional information about our authorized capital, including our common stock, our outstanding warrants to purchase common stock, and convertible preferred stock, we refer you to our amended and restated certificate of incorporation and amended and restated bylaws, which are included herein as Exhibit 3.1, Exhibit 3.2, Exhibit 3.3, Exhibit 3.4, Exhibit 3.5, Exhibit 3.7, and 3.11, respectively, and our filings with the SEC that are incorporated by reference in this prospectus, including our Annual Report on Form 10-K for the year ended December 31, 2024. For instructions on how to find copies of these documents, please read “Where You Can Find Additional Information” and “Information Incorporated by Reference.”

**Common Stock**

The material terms and provisions of our common stock and each other class of our securities which qualifies or limits our common stock are described under the caption “Description of Capital Stock” in this prospectus.

**Pre-Funded Warrants**

The following summary of certain terms and provisions of the pre-funded warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the pre-funded warrant, the form of which will be filed as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of pre-funded warrant for a complete description of the terms and conditions of the pre-funded warrants.

*Duration, Exercise Price and Form*

The pre-funded warrants offered hereby will have an exercise price of \$0.001 per share. The pre-funded warrants will be immediately exercisable and may be exercised at any time after their original issuance until such pre-funded warrants are exercised in full. The exercise price and number of shares of common stock issuable upon exercise are subject to appropriate adjustment in the event of share dividends, share splits, reorganizations or similar events affecting our shares of common stock. The pre-funded warrants are immediately separable and will be issued separately in this offering, but must be purchased together in this offering. The pre-funded warrants will be issued in certificated form only.

*Exercisability*

The pre-funded warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the pre-funded warrants to the extent that the holder would own more than 4.99% (or at the election of a holder prior to the date of issuance, 9.99%) of the outstanding common stock immediately after exercise; provided, however, that upon prior notice to us, the holder may increase or decrease such beneficial ownership limitation, provided that in no event shall the beneficial ownership limitation exceed 9.99% and any increase in the beneficial ownership limitation will not be effective until sixty-one days following notice of such increase from the holder to us.

*Cashless Exercise*

At the time a holder exercises its pre-funded warrants, in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the pre-funded warrants.

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*Fundamental Transactions*

In the event of a fundamental transaction, as described in the pre-funded warrants and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common stock, or any person or group becoming the beneficial owner of more than 50% of the voting power represented by our outstanding common stock, the holders of the pre-funded warrants will be entitled to receive upon exercise of the pre-funded warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the pre-funded warrants immediately prior to such fundamental transaction.

*Transferability*

Subject to applicable laws, a pre-funded warrant may be transferred at the option of the holder upon surrender of the pre-funded warrant to us together with the appropriate instruments of transfer.

*Fractional Shares*

No fractional shares of common stock will be issued upon the exercise of the pre-funded warrants. Rather, the number of shares of common stock to be issued will, at our election, either be rounded up to the nearest whole number or we will pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price.

*Trading Market*

There is no established trading market for the pre-funded warrants, and we do not expect a market to develop. We do not intend to apply for a listing of the pre-funded warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the pre-funded warrants will be limited. The common stock issuable upon exercise of the pre-funded warrants is currently listed on Nasdaq.

*Rights as a Stockholder*

Except as otherwise provided in the pre-funded warrants or by virtue of the holders' ownership of shares of common stock, the holders of pre-funded warrants do not have the rights or privileges of holders of our shares of common stock, including any voting rights, until such pre-funded warrants holders exercise their warrants.

*Waivers and Amendments*

No term of the pre-funded warrants may be amended or waived without the written consent of the holders of the pre-funded warrants purchased in this offering.

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**PLAN OF DISTRIBUTION**

Pursuant to that certain engagement agreement (the “Engagement Agreement”), we have engaged \_\_\_\_\_, or the placement agent, to act as our exclusive placement agent to solicit offers to purchase the shares of our common stock and pre-funded warrants offered by this prospectus. The placement agent is not purchasing or selling any such securities, nor is it required to arrange for the purchase and sale of any specific number or dollar amount of such securities, other than to use its “reasonable best efforts” to arrange for the sale of such securities by us. Therefore, we may not sell all of the shares of common stock and pre-funded warrants being offered. The terms of this offering are subject to market conditions and negotiations between us, the placement agent and prospective investors. The placement agent will have no authority to bind us by virtue of the Engagement Agreement. This is a best efforts offering and there is no minimum offering amount required as a condition to the closing of this offering. The placement agent may retain sub-agents and selected dealers in connection with this offering.

Investors purchasing securities offered hereby will have the option to execute a securities purchase agreement with us. Investors who do not enter into a securities purchase agreement shall rely solely on this prospectus in connection with the purchase of our securities in this offering. In addition to rights and remedies available to all purchasers in this offering under federal securities and state law, the purchasers which enter into a securities purchase agreement will also be able to bring claims of breach of contract against us. The ability to pursue a claim for breach of contract is material to larger purchasers in this offering as a means to enforce the following covenants uniquely available to them under the securities purchase agreement, including but not limited to: (i) a covenant to not enter into variable rate financings for a period of \_\_\_\_\_ following the closing of the offering, subject to exceptions; and (ii) a covenant to not enter into any equity financings for forty five-days from closing of the offering, subject to certain exceptions.

The nature of the representations, warranties and covenants in the securities purchase agreements shall include, but are not limited to:

- standard issuer representations and warranties on matters such as organization, qualification, authorization, no conflict, no governmental filings required, current in SEC filings, no litigation, labor or other compliance issues, environmental, intellectual property and title matters and compliance with various laws such as the Foreign Corrupt Practices Act; and
- covenants regarding matters such as registration of shares issued and issuable upon exercise of the common stock purchase warrants, no integration with other offerings, no shareholder rights plans, use of proceeds, indemnification of purchasers, reservation and listing of common stock, and no subsequent equity sales for a period of forty five-days, subject to certain exceptions.

Delivery of the shares of common stock, pre-funded warrants offered hereby is expected to occur on or about \_\_\_\_\_, 2025, subject to satisfaction of certain customary closing conditions.

**Fees and Expenses**

The following table shows the per share and per pre-funded warrant and total placement agent fees we will pay in connection with the sale of the securities in this offering.

	<u>Per Share</u>	<u>Per Pre-Funded Warrant</u>	<u>Total</u>
Public offering price			
Placement agent fees			
Proceeds to us (before expenses)			

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We have agreed to pay the placement agent a total cash fee equal to [●]% of the aggregate gross proceeds raised in the offering and a management fee equal to 1.0% of the gross proceeds raised in this offering. We will also pay the placement agent a non-accountable expense allowance of \$[●], its legal fees and expenses in an amount up to \$[●] and its clearing fees in an amount up to \$[●] in connection with this offering. We estimate the total offering expenses of this offering that will be payable by us, excluding the placement agent fees and expenses, will be approximately \$

**Lock-Up Agreements**

Our officers and directors, representing beneficial ownership of [●]% of our outstanding shares of common stock as of November [●], 2025, have agreed with the placement agent to be subject to a lock-up period of [●] days following the closing of this offering. This means that, during the applicable lock-up period, such persons may not offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, shares of our common stock. Certain limited transfers are permitted during the lock-up period if the transferee agrees to these lock-up restrictions. We have also agreed to similar lock-up restrictions on the issuance and sale of our securities for forty-five days following the closing of this offering, subject to certain exceptions. The placement agent may, in its sole discretion and without notice, waive the terms of any of these lock-up agreements.

In addition, subject to certain exceptions, we have agreed to not issue any securities that are subject to a price reset based on the trading prices of our common stock or upon a specified or contingent event in the future, or enter into any agreement to issue securities at a future determined price for a period of following the closing date of this offering, subject to an exception. The placement agent may, in its sole discretion and without notice, waive the terms of this prohibition.

**Indemnification**

We have agreed to indemnify the placement agent against certain liabilities, including certain liabilities under the Securities Act, or to contribute to payments that the placement agent may be required to make in respect of those liabilities.

In addition, we will indemnify the purchasers of securities in this offering against liabilities arising out of or relating to (i) any breach of any of the representations, warranties, covenants or agreements made by us in the securities purchase agreement or related documents, or (ii) any action instituted against a purchaser by a third party (other than a third party who is affiliated with such purchaser) with respect to the securities purchase agreement or related documents and the transactions contemplated thereby, subject to certain exceptions.

**Regulation M Compliance**

The placement agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and any fees received by it and any profit realized on the sale of our securities offered hereby by it while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. The placement agent will be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of our securities by the placement agent. Under these rules and regulations, the placement agent may not (i) engage in any stabilization activity in connection with our securities; and (ii) bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until they have completed their participation in the distribution.

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**Other Relationships**

The placement agent and its affiliates have engaged, and may in the future engage, in investment banking transactions and other commercial dealings in the ordinary course of business with us or our affiliates. The placement agent has received, or may in the future receive, customary fees and commissions for these transactions.

In addition, in the ordinary course of their business activities, the placement agent and its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The placement agent and its affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Except as disclosed in this prospectus, we have no present arrangements with the placement agent for any further services.

**Electronic Distribution**

A prospectus in electronic format may be made available on a website maintained by the placement agent and the placement agent may distribute prospectuses electronically. Other than the prospectus in electronic format, the information on these websites is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the placement agent and should not be relied upon by investors.

**Nasdaq listing**

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, is acting as counsel for the placement agent in connection with this offering.

**EXPERTS**

The financial statements of Plus Therapeutics, Inc. (the “Company”) as of December 31, 2024 and 2023 and for the years then ended incorporated by reference in this Prospectus 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 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](http://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. We also maintain a website at <https://plustherapeutics.com>. You may access our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, Proxy Statements and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. Information contained in, or accessible through, our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is only as an inactive textual reference.

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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 Quarterly Report on Form 10-Q for the quarter ended June 30, 2025 (filed with the SEC on August 14, 2025), our Quarterly Report on Form 10-Q for the quarter ended September 30, 2025 (filed with the SEC on October 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, July 18, 2025, August 12, 2025, August 13, 2025, August 14, 2025, August 14, 2025, August 26, 2025, October 16, 2025, and October 30, 2025;
- our definitive proxy statement on Schedule 14A (filed with the SEC on April 10, 2025), our definitive proxy statement on Schedule 14A (filed with the SEC on July 21, 2025) and our supplement to the definitive proxy statement on Schedule 14A (filed with the SEC on August 1, 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.
- the description of our common stock contained in our registration statement on Form 10/A (File No. 000-32501), filed on July 16, 2001, and any amendment or report filed with the Commission for the purpose of updating the description.

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.,

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6420 Levitt Green Boulevard, Suite 310, Houston, Texas 77021, (737) 255-7194. You may also access these documents, free of charge, on the SEC's website at [www.sec.gov](http://www.sec.gov) or on the "Investors" page of our website at [www.plustherapeutics.com](http://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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**Up to** **Shares of Common Stock**

**Pre-Funded Warrants to purchase up to** **Shares of Common Stock**  
**Shares of Common Stock underlying Pre-Funded Warrants**

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**PRELIMINARY  
PROSPECTUS**

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, 2025

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**PART II**

**Information Not Required in Prospectus**

**Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth the estimated costs and expenses in connection with the offering described in this registration statement. All expenses incurred with respect to the sale and distribution of the securities being registered hereby (other than placement agent fees) will be borne by us. All amounts are estimates except the SEC registration fee and the Financial Industry Regulatory Authority (“FINRA”) filing fee.

	<u>Amount</u>
SEC registration fee	\$
FINRA filing fee	\$
Accountant’s fees and expenses	\$
Legal fees and expenses	\$
Transfer agent’s fees and expenses	\$
Printing fees and expenses	\$
Miscellaneous	\$
Total expenses	\$

**Item 14. Indemnification of Directors and Officers.**

Section 102(b)(7) of the DGCL enables a corporation, in its certificate of incorporation or an amendment thereto, to eliminate or limit 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.

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Our amended and restated certificate of incorporation, as amended, and amended and restated bylaws provide that we shall indemnify our directors, officers, 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.

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 DGCL.

**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

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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.

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

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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 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.**

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

- (i) To include any prospectus required by section 10(a)(3) of the Securities Act 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;

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*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.

- (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 in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
    - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
    - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
    - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
    - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) 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.
- (c) The undersigned Registrant hereby undertakes that:
- (1) For purposes of determining any liability under the Securities, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
  - (2) For the purpose of determining any liability under the Securities, each post-effective amendment that contains a form of prospectus 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.

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**Exhibit Index**

<u>Exhibit Number</u>	<u>Exhibit Title</u>	<u>Filed with this Form S-1</u>	<u>Incorporated by Reference</u>		
			<u>Form</u>	<u>File No.</u>	<u>Date Filed</u>
3.1	Composite Certificate of Incorporation.		10-K	001-34375 Exhibit 3.1	03/11/2016
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation.		8-K	001-34375 Exhibit 3.1	05/10/2016
3.3	Certificate of Amendment to Amended and Restated Certificate of Incorporation.		8-K	001-34375 Exhibit 3.1	05/23/2018
3.4	Certificate of Amendment to Amended and Restated Certificate of Incorporation.		8-K	001-34375 Exhibit 3.1	07/29/2019
3.5	Certificate of Amendment to Amended and Restated Certificate of Incorporation.		8-K	001-34375 Exhibit 3.1	08/06/2019
3.6	Certificate of Amendment to Amended and Restated Certificate of Incorporation.		8-K	001-34375 Exhibit 3.1	4/28/2023
3.7	Certificate of Amendment to the Certificate of Incorporation, as amended		8-K	001-34375 Exhibit 3.1	05/02/2025
3.8	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock.		8-K	001-34375 Exhibit 3.1	11/28/2017
3.9	Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock.		8-K	001-34375 Exhibit 3.1	07/25/2018
3.10	Certificate of Designation of Series F Convertible Preferred Stock		8-K	001-34375 Exhibit 3.1	03/03/2023
3.11	Amended and Restated Bylaws of Plus Therapeutics, Inc.		8-K	001-34375 Exhibit 3.2	09/21/2021
4.1	Description of Securities.		10-K	001-34375 Exhibit 4.1	03/30/2020
4.2	Form of Common Stock Certificate.		10-K	001-34375 Exhibit 4.33	03/09/2018
4.3*	Form of Pre-Funded Warrant.				
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	011-34375 Exhibit 10.1	3/30/2020
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	011-34375 Exhibit 10.2	2/24/2022

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

<b>Exhibit Number</b>	<b>Exhibit Title</b>	<b>Filed with this Form S-1</b>	<b>Incorporated by Reference</b>		
			<b>Form</b>	<b>File No.</b>	<b>Date Filed</b>
10.3#	Amended and Restated Employment Agreement, dated March 11, 2020, by and between Marc Hedrick and Plus Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.6	5/16/2020
10.4#	Amended and Restated Employment Agreement, dated March 11, 2020, by and between Andrew Sims and Plus Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.7	5/16/2020
10.5#	2015 New Employee Incentive Plan.		8-K	001-34375 Exhibit 10.1	01/05/2016
10.6#	First Amendment to the Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated January 26, 2017.		10-K	001-34375 Exhibit 10.42	03/24/2017
10.7#	Second Amendment to the Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated February 6, 2020.		10-K	001-34375 Exhibit 10.25	03/30/2020
10.8#	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
10.9*	Fourth Amendment to the Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated November 7, 2025.				
10.10#	Form of Notice of Grant of Stock Option under the 2015 New Employee Incentive Plan.		S-8	333-210211 Exhibit 99.5	03/15/2016
10.11#	Form of Stock Option Agreement under the 2015 New Employee Incentive Plan.		S-8	333-210211 Exhibit 99.4	03/15/2016
10.12#	Fifth Amended and Restated Plus Therapeutics, Inc. 2020 Stock Incentive Plan.		10-Q	001-34375 Exhibit 10.15	08/14/2025
10.13#	Form of Notice of Grant and Stock Option Agreement under the 2020 Stock Incentive Plan.		10-K	001-34375 Exhibit 10.26	02/24/2022
10.14+	Master Services Agreement, dated January 24, 2021, by and between Piramal Pharma Solutions, Inc. and Plus Therapeutics, Inc.		10-K	001-334275 Exhibit 10.24	02/22/2021
10.15#	Form of Indemnification Agreement.		8-K	001-34375 Exhibit 10.1	02/06/2020
10.16#	Form of Agreement for Acceleration and/or Severance.		10-K	001-34375 Exhibit 10.113	03/11/2016

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			<u>Form</u>	<u>File No.</u>	<u>Date Filed</u>
10.17	Medidata Services Agreement and Statement of Work, dated November 5, 2021, by and between Medidata Solutions, Inc. and Plus Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.1	04/21/2022
10.18	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 Exhibit 10.1	09/22/2022
10.19	Subscription and Investment Representation Agreement, dated March 3, 2023, by and between Plus Therapeutics, Inc. and the purchaser signatory thereto.		8-K	001-34375 Exhibit 10.1	03/03/2023
10.20*	Form of Securities Purchase Agreement.				
23.1*	Consent of BDO USA, P.C.				
23.2*	Consent of Sullivan & Worcester LLP (included in Exhibit 5.1).				
24.1 †	Power of Attorney.				
107*	Fee Table.				

- # Indicates management contract or compensatory plan or arrangement.  
+ Portions of this exhibit have been excluded pursuant to Item 601(b)(1)(iv).  
\* To be filed by amendment.  
† Previously filed.

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

**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 November [ ], 2025.

**PLUS THERAPEUTICS, INC.**

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

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.

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