

The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement related to these securities has been declared effective by the Securities and Exchange Commission. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and are not the solicitation of an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JUNE 2, 2026

**Filed pursuant to Rule 424(b)(5)
Registration No. 333-288205**

**Preliminary Prospectus Supplement
(to Prospectus dated December 22, 2025)**



Shares of Common Stock

NRx Pharmaceuticals, Inc. (“NRx,” the “Company,” “we” or “our”) is offering _____ shares of its common stock, par value \$0.001 per share (the “Common Stock”) pursuant to this prospectus supplement (this “Prospectus Supplement”) and the accompanying base prospectus (the “Base Prospectus”). The public offering price for each share of Common Stock is \$ _____.

We have granted the underwriters the option to purchase, exercisable within a 30-day period, up to an additional shares of Common Stock. We are offering all of the shares of Common Stock offered by this Prospectus Supplement on a firm commitment underwritten basis.

Our Common Stock is listed on The Nasdaq Capital Market (“Nasdaq”) under the symbol “NRXP.” On June 1, 2026, the last reported sale price of our Common Stock on Nasdaq was \$4.62 per share.

Investing in our securities involves a high degree of risk, including the risk of a substantial loss of investment. Before purchasing any shares of our common stock, you should read the discussion of the principal risks of investing in our securities, which are summarized in “Risk Factors” beginning on page S-5 of the Prospectus Supplement and page 3 of the Base Prospectus, as well as in other documents incorporated by reference into this Prospectus Supplement.

	Per share of Common Stock	Total
Public offering price	\$ _____	\$ _____
Underwriting discounts and commissions ⁽¹⁾	\$ _____	\$ _____
Proceeds, before expenses, to us ⁽¹⁾⁽²⁾	\$ _____	\$ _____

(1) See “Underwriting” beginning on page S-10 for additional information regarding compensation payable in connection with this offering.

(2) If the underwriters exercise their option to purchase additional shares of Common Stock in full, the total underwriting discounts and commissions payable by us will be \$ _____, and the total proceeds to us, before expenses, will be \$ _____.

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

Delivery of the shares of Common Stock offered hereby is expected to be made on or about June _____, 2026, subject to the satisfaction of certain closing conditions.

Lead Bookrunning Manager

BTIG

Joint Bookrunning Manager

Lucid Capital Markets

The date of this Prospectus Supplement is June _____, 2026.

TABLE OF CONTENTS

PROSPECTUS SUPPLEMENT

About this Prospectus Supplement	S-1
Cautionary Note Regarding Forward-Looking Statements	S-2
Summary	S-3
Risk Factors	S-5
Use of Proceeds	S-8
Dilution	S-9
Underwriting	S-10
Legal Matters	S-16
Experts	S-16
Where You Can Find More Information	S-16
Incorporation of Documents by Reference	S-16

PROSPECTUS

About This Prospectus	1
Prospectus Summary	2
Risk Factors	3
Cautionary Note Regarding Forward-Looking Statements	4
Use of Proceeds	5
Description of our Capital Stock	6
Description of the Debt Securities	9
Description of the Depositary Shares	18
Description of the Warrants	21
Description of the Rights	22
Description of the Purchase Contracts	23
Description of the Units	23
Description of Certain Provisions of Delaware Law and our Certificate of Incorporation and Bylaws	24
Plan of Distribution	25
Legal Matters	27
Experts	27
Where You Can Find More Information	28
Incorporation of Certain Information by Reference	28

ABOUT THIS PROSPECTUS SUPPLEMENT

This Prospectus Supplement and the accompanying Base Prospectus are part of a “shelf” registration statement on Form S-3, as amended, (File No. 333-288205) that we originally filed with the U.S. Securities and Exchange Commission (the “SEC”), on June 20, 2025, and an amendment thereto on December 12, 2025 and which became effective on December 22, 2025. Under this shelf registration process, we may, from time to time, sell shares of our Common Stock in one or more offerings.

This Prospectus Supplement and the accompanying Base Prospectus do not contain all of the information in the registration statement. We have omitted certain parts of the registration statement, as permitted by the rules and regulations of the SEC. You should read this entire Prospectus Supplement and the accompanying Base Prospectus, together with the additional information described therein under the headings “*Incorporation of Certain Documents by Reference*” and “*Where You Can Find More Information*” carefully before making an investment decision. The accompanying Base Prospectus, including the documents incorporated by reference therein, provides more general information, some of which may not apply to this offering. Generally, when we refer to this “*Prospectus*,” we are referring to both this Prospectus Supplement and the accompanying Base Prospectus combined.

You should rely only on the information contained, or incorporated by reference, in this Prospectus Supplement and the accompanying Base Prospectus. Neither we nor the underwriters have authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. Neither we nor the underwriters are making an offer to sell the securities in any jurisdiction where the offer or sale is not permitted or in which the person making such offer or solicitation is not qualified to do so or to any person to whom it is unlawful to make such offer or solicitation.

To the extent there is a conflict between the information contained in this Prospectus Supplement, on the one hand, and the accompanying Base Prospectus or in any document incorporated by reference that was filed with the SEC before the date of this Prospectus Supplement, as amended, on the other hand, you should rely on the information in this Prospectus Supplement. If any statement in one of these documents is inconsistent with a statement in another document having a later date - for example, a document incorporated by reference in the accompanying Base Prospectus - the statement in the document having the later date modifies or supersedes the earlier statement.

You should assume that the information contained in this Prospectus Supplement is accurate as of the date on the front cover of this Prospectus Supplement only and that any information we have incorporated by reference or included in the Base Prospectus is accurate only as of the date given in the document incorporated by reference or as of the date of the Prospectus, as applicable, regardless of the time of delivery of this Prospectus Supplement, or the accompanying Base Prospectus or any sale of our common stock. Our business, financial condition, liquidity, results of operations and prospects may have changed since that date.

You should not consider any information in this Prospectus Supplement or the accompanying Base Prospectus to be investment, legal or tax advice. You should consult your own counsel, accountants and other advisers for legal, tax, business, financial and related advice regarding the purchase of the Common Stock offered by this Prospectus Supplement.

Unless the context otherwise indicates, references in this Prospectus Supplement to the “*Company*,” “*we*,” “*us*” and “*our*” refer to NRx Pharmaceuticals, Inc., a Delaware corporation, and its consolidated subsidiaries.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Prospectus Supplement, the accompanying Base Prospectus and the information incorporated by reference herein include “forward-looking statements” within the meaning of the “safe harbor” provisions of the U.S. Private Securities Litigation Reform Act of 1995, which may include, but are not limited to, statements regarding our financial outlook, product development, business prospects, and market and industry trends and conditions, as well as the Company’s strategies, plans, objectives, and goals. These forward-looking statements are based on current beliefs, expectations, estimates, forecasts, and projections of, as well as assumptions made by, and information currently available to, the Company’s management. Words such as “expect,” “anticipate,” “should,” “believe,” “hope,” “target,” “project,” “goals,” “estimate,” “potential,” “predict,” “may,” “will,” “might,” “could,” “would,” “seek,” “plan,” “intend,” “shall,” and variations of these terms or the negative of these terms and similar expressions are intended to identify these forward-looking statements. These forward-looking statements are, by their nature, subject to significant risks and uncertainties, many of which involve factors or circumstances that are beyond the Company’s control. These risks and uncertainties include, but are not limited to, our relatively limited operating history; our ability to expand, retain and motivate our employees and manage our growth; risks associated with general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations; the impact of pharmaceutical industry regulation and health care legislation in the United States and internationally; technological advances, new products and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approval; the Company’s ability to accurately predict future market conditions; manufacturing difficulties or delays; changes in laws, rules or regulations relating to any aspect of the Company’s business operations, or general economic, market and business conditions; financial instability of international economies and sovereign risk; dependence on the effectiveness of the Company’s patents and other protections for innovative products; and the exposure to litigation, including patent litigation, and/or regulatory actions. Furthermore, there can be no guarantees with respect to pipeline products that the products will receive the necessary regulatory approvals or that they will prove to be commercially successful. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements. The Company assumes no obligation and does not intend to update or otherwise revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by applicable law. As a result of these and other risks, uncertainties and assumptions, forward-looking events and circumstances discussed herein might not occur in the way that the Company’s management expects, if at all. Accordingly, you should not place reliance on any forward-looking statement, and all forward-looking statements are herein qualified by reference to the cautionary statements set forth above.

SUMMARY

This summary highlights certain information contained in or incorporated by reference into this Prospectus Supplement and the accompanying Base Prospectus. Because this is only a summary, it does not contain all of the information that may be important to you. We encourage you to read this entire Prospectus Supplement, the accompanying Base Prospectus, the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” together with our consolidated financial statements and the related notes thereto in our most recent Annual Report on Form 10-K and Quarterly Report on Form 10-Q, and the other documents incorporated herein by reference, before making a decision whether to invest in our Common Stock.

Company Overview

We are a clinical-stage bio-pharmaceutical company which develops and expects to distribute, through our wholly-owned operating subsidiary, NeuroRx, Inc. (“*NeuroRx*”), novel therapeutics for the treatment of central nervous system disorders including suicidal depression, chronic pain, post-traumatic stress disorder (“*PTSD*”) and schizophrenia. We are additionally the founder and majority owner of HOPE Therapeutics, Inc. (“*HOPE*”), a medical services company that offers interventional psychiatry care to patients with treatment-resistant depression and PTSD with a combination of neuroplastic drugs, transcranial magnetic stimulation (“*TMS*”), digital therapeutics, and hyperbaric therapy. In 2026, we founded two additional Florida-based subsidiaries: NRx Defense Systems, Inc. (“*NDS*”) and GeNeuro, Inc. (“*GeNeuro*”). Historically, our drug development activities are focused on drugs that enhance neuroplasticity by modulating the N-methyl-D-aspartate (“*NMDA*”) receptor in the brain and nervous system, a neurochemical pathway that has been disclosed in detail in our annual filings. NDS is focused on advancing recent clinical findings that suggest low-dose D-cycloserine (the key ingredient in NRX-101) may increase the antidepressant and anti-suicidal effects of TMS by more than two-fold; while, GeNeuro is expected to focus on a portfolio of diagnostic and therapeutic advances related to the role of Human Endogenous Retroviruses in causing Central Nervous System Diseases including Schizophrenia and other Psychoses, Multiple Sclerosis, Amyelotrophic Lateral Sclerosis, autism, and Optic Neuritis. GeNeuro is partnered with the US National Institutes of Health through a prior Cooperative Research and Development Agreement with the Fondation FondaMental (Paris).

Corporate Information

We were incorporated under the laws of the State of Delaware on September 18, 2017 under the name Big Rock Partners Acquisition Corp. Upon the closing of the business combination with NeuroRx, Inc. on May 24, 2021, we changed our name to NRx Pharmaceuticals, Inc. Our principal executive offices are located at 1201 Orange Street, Suite 600, Wilmington, Delaware 19801, our mailing address is 1201 North Market Street, Suite 111, Wilmington, Delaware 19801 and our telephone number is (484) 254-6134. Our website address is www.nrxpharma.com. The information contained on, or accessible through, our website does not constitute a part of and is not incorporated by reference in this Prospectus Supplement. We have included our website address in this Prospectus Supplement solely as an inactive textual reference.

THE OFFERING

Common Stock Offered: shares of Common Stock. We have granted the underwriters the right to purchase, exercisable within a 30-day period, up to an additional shares of Common Stock.

Offering Price: \$ per share of Common Stock.

Common Stock to be Outstanding After this Offering: shares of Common Stock (or shares of Common Stock if the underwriters fully exercise their option to purchase additional shares of Common Stock).

Use of Proceeds: We estimate that the net proceeds from this offering will be approximately \$ (or approximately \$ if the underwriters fully exercise their option to purchase additional shares of Common Stock), after deducting underwriting discounts and commissions. We currently intend to use the net proceeds from this offering for working capital and general corporate purposes to support our growth.. See “*Use of Proceeds.*”

Risk Factors: Investing in our Common Stock involves significant risks. See “*Risk Factors*” beginning on page S-5 of this Prospectus Supplement, page 3 of the Base Prospectus, and other information included or incorporated by reference into this Prospectus Supplement and the accompanying Base Prospectus for a discussion of factors you should carefully consider before investing in our Common Stock.

Nasdaq Symbol: The Common Stock is traded on Nasdaq under the symbol “NRXP.”

Transfer and Registrar: Continental Stock Transfer & Trust Company.

The number of shares of our Common Stock to be outstanding after this offering is based on 36,228,992 shares of Common Stock outstanding as of May 15, 2026. Unless the context otherwise requires, as of May 15, 2026, the number of shares of our Common Stock to be outstanding after this offering excludes:

- 687,490 shares of Common Stock issuable upon the exercise of outstanding options at a weighted average exercise price of \$8.62 per share;
- 9,359,710 shares of Common Stock issuable upon the exercise of outstanding warrants at a weighted average exercise price of \$7.77 per share; and
- 32,895 shares of Common Stock underlying restricted stock awards.

RISK FACTORS

An investment in our common stock involves a high degree of risk. Prior to making a decision about investing in our common stock, you should carefully consider the specific factors discussed below and discussed under the section entitled “Risk Factors” contained in our Annual Report on Form 10-K for the fiscal year ended December 31, 2025, as updated by our subsequent filings under the Exchange Act, each of which is incorporated by reference in this Prospectus Supplement, and the accompanying Base Prospectus in their entirety, together with all of the other information contained or incorporated by reference in this Prospectus Supplement, the accompanying Base Prospectus, and the documents incorporated by reference herein and therein. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations. The occurrence of any of these known or unknown risks might cause you to lose all or part of your investment in the offered securities.

Risks Related to Our Common Stock and this Offering

Management will have broad discretion as to the use of the proceeds from this offering and may not use the proceeds effectively.

We are not limited in the use of proceeds of shares sold to investors. We may use such proceeds for working capital and general corporate purposes to support our growth or for acquisitions or other strategic investments. We have not allocated such funds to any particular purpose, and our management will have the discretion to allocate the proceeds as it determines. We may not apply the proceeds effectively.

If you purchase our Common Stock in this offering, you may incur immediate dilution in the book value of your investment.

The offering price per share in this offering may exceed the historical and pro forma net tangible book value per share of our common stock outstanding prior to this offering. After giving effect to the sale of _____ shares of our Common Stock at a price of \$ _____ per share in this offering, and after deducting commissions and estimated offering expenses payable by us, you would experience immediate dilution of \$ _____ per share, representing the difference between our pro forma net tangible book value per share as of March 31, 2026 and after giving effect to this offering. The exercise of outstanding stock options and warrants or the settlement of outstanding restricted stock awards would result in further dilution of your investment. See the section entitled “*Dilution*” below for a more detailed illustration of the dilution you may incur if you participate in this offering.

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, we may in the future offer additional shares of our Common Stock or other securities convertible into or exchangeable for our Common Stock at prices that may not be the same as the price per share in this offering. We may sell shares or other securities in any other offering at a price per share that is less than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our Common Stock, or securities convertible or exchangeable into Common Stock, in future transactions may be higher or lower than the price per share paid by investors in this offering.

If securities analysts do not publish research or reports about us, or if they issue unfavorable commentary about us or our industry or downgrade our Common Stock, the price of our Common Stock could decline.

The trading market for our Common Stock will depend in part on the research and reports that third-party securities analysts publish about us and the industries in which we operate. We may be unable, or slow, to attract and maintain research coverage and if one or more analysts cease coverage of us, the price and trading volume of our securities would likely be negatively impacted. If any of the analysts that may cover us change their recommendation regarding our securities adversely, or provide more favorable relative recommendations about our competitors, the price of our securities would likely decline. If any analyst that may cover us ceases covering us or fails to regularly publish reports on us, we could lose visibility in the financial markets, which could cause the price or trading volume of our securities to decline. Moreover, if one or more of the analysts who cover us downgrades our Common Stock, or if our reporting results do not meet their expectations, the market price of our Common Stock could decline.

Our Common Stock price may be volatile or may decline regardless of our operating performance. You may lose some or all of your investment.

The trading price of our Common Stock is likely to be volatile. The stock market recently has experienced extreme volatility. This volatility often has been unrelated or disproportionate to the operating performance of particular companies. You may not be able to resell your shares at an attractive price due to a number of factors such as those listed in “*Risks Related to Our Business and Industry*” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2025, and the following:

- our operating and financial performance and prospects;
- our quarterly or annual earnings or those of other companies in our industry compared to market expectations;
- conditions that impact demand for our products;
- future announcements concerning our business, our product users’ businesses or our competitors’ businesses;
- the public’s reaction to our press releases, other public announcements and filings with the SEC;
- the size of our public float;
- coverage by or changes in financial estimates by securities analysts or failure to meet their expectations;
- market and industry perception of our success, or lack thereof, in pursuing our growth strategy;
- strategic actions by us or our competitors, such as acquisitions or restructurings;
- changes in laws or regulations which adversely affect our industry or us; changes in accounting standards, policies, guidance, interpretations or principles; changes in senior management or key personnel;
- issuances, exchanges or sales, or expected issuances, exchanges or sales of our capital stock;
- changes in our dividend policy; adverse resolution of new or pending litigation against us; and
- changes in general market, economic and political conditions in the U.S. and global economies or financial markets, including those resulting from natural disasters, terrorist attacks, acts of war and responses to such events.

These broad market and industry factors may materially reduce the market price of our Common Stock, regardless of our operating performance. In addition, price volatility may be greater if the public float and trading volume of our Common Stock is low. As a result, you may suffer a loss on your investment.

Securities litigation could have a substantial cost and divert resources and the attention of executive management from our business regardless of the outcome of such litigation.

The market price of our Common Stock may be volatile, which could subject us to securities class action litigation and result in substantial losses for our stockholders.

The market price of shares of our Common Stock could be subject to wide fluctuations in response to many risk factors listed in this section and the documents incorporated by reference in this Prospectus Supplement and the accompanying Base Prospectus as well as other factors others beyond our control. Furthermore, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations as well as general economic, political and market conditions, such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of shares of our common stock. In addition, such fluctuations could subject us to securities class action litigation, which could result in substantial costs and divert our management's attention from other business concerns, which could potentially harm our business. As a result of this volatility, our stockholders may not be able to sell their shares of our Common Stock at or above the price at which they purchased their shares of our Common Stock.

We do not intend to pay cash dividends on our Common Stock for the foreseeable future.

We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. As a result, we do not anticipate declaring or paying any cash dividends on our Common Stock in the foreseeable future. Any decision to declare and pay dividends in the future will be made at the discretion of our Board and will depend on, among other things, our business prospects, results of operations, financial condition, cash requirements and availability, legal requirements, certain restrictions related to our indebtedness, industry trends and other factors that our Board may deem relevant. Any such decision will also be subject to compliance with contractual restrictions and covenants in the agreements governing our current and future indebtedness. In addition, we may incur indebtedness, the terms of which may further restrict or prevent us from paying dividends on our Common Stock. As a result, you may have to sell some or all of your Common Stock after price appreciation in order to generate cash flow from your investment, which you may not be able to do. Our inability or decision not to pay dividends, particularly when others in our industry have elected to do so, could also adversely affect the market price of our Common Stock.

USE OF PROCEEDS

We estimate that the net proceeds we receive from this offering will be approximately \$ (or approximately \$ if the underwriters fully exercise their option to purchase additional shares of Common Stock) after deducting the underwriting discounts and commissions.

We currently intend to use the net proceeds from this offering for working capital and general corporate purposes to support our growth.

Our management retains broad discretion regarding the use of the net proceeds from this offering, including discretion over the amounts and timing of any actual expenditures. Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in marketable securities that may include investment-grade interest-bearing securities, money market accounts, certificates of deposit, commercial paper and guaranteed obligations of the U.S. government in accordance with our investment policy.

DILUTION

Our net tangible book value as of March 31, 2026 was approximately \$(16,488,000), or \$(0.46) per share. Our net tangible book value as of March 31, 2026 is determined by dividing our total tangible assets, less total liabilities, by the number of shares of our common stock outstanding as of March 31, 2026. Dilution with respect to pro forma net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the pro forma net tangible book value per share of our common stock immediately after this offering.

After giving effect to the sale of shares of our Common Stock in this offering at an offering price of \$ per share, and after deducting estimated offering commissions and offering expenses payable by us, our pro forma net tangible book value as of March 31, 2026 would have been approximately \$ million or \$ per share. This represents an immediate increase in net tangible book value of \$ per share to existing stockholders and immediate dilution of \$ per share to investors purchasing our Common Stock in this offering at the public offering price. The following table illustrates this dilution on a per share basis:

Public offering price per share of Common Stock		\$
Net tangible book value per share as of March 31, 2026	\$	(0.46)
Increase in net tangible book value per share attributable to this offering	\$	
Pro forma net tangible book value per share after this offering		\$
Dilution per share to new investors purchasing in this offering		\$

The above discussion and table are based on 36,228,992 shares of Common Stock outstanding as of March 31, 2026, and excludes:

- 687,490 shares of Common Stock issuable upon the exercise of outstanding options at a weighted average exercise price of \$8.62 per share;
- 9,359,710 shares of Common Stock issuable upon the exercise of outstanding warrants at a weighted average exercise price of \$7.77 per share; and
- 32,895 shares of Common Stock underlying restricted stock awards.

UNDERWRITING

We have entered into an underwriting agreement with BTIG, LLC, as representative of the several underwriters (the “Representative”). Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and the each underwriter has severally agreed to purchase from us, the number of shares of our Common Stock set forth opposite its name below, pursuant to the terms and conditions contained in the underwriting agreement.

Name	Number of Shares
BTIG, LLC	
Lucid Capital Markets, LLC	
Total	

The underwriting agreement provides that the obligation of the underwriters to purchase the shares of Common Stock offered by this Prospectus Supplement and the accompanying Base Prospectus is subject to certain conditions. The underwriters are obligated to purchase all of the shares of Common Stock offered hereby if any of the shares are purchased. The underwriters expect to deliver the shares of Common Stock to purchasers on or about June , 2026, subject to the satisfaction of customary closing conditions.

Commissions and Discounts

The underwriters propose to offer the shares of Common Stock directly to investors at the offering price set forth on the cover page of this Prospectus Supplement, and to dealers at that price less a concession not in excess of \$ per share of Common Stock. After this offering, the offering price, concessions and other selling terms may be changed by the underwriters. The shares of Common Stock are offered subject to receipt and acceptance by the underwriters and to the other conditions, including the right to reject orders in whole or in part.

The following table summarizes the compensation to be paid to the underwriters by us and the proceeds, before expenses, payable to us:

	Per Share of Common Stock	Without Option to Purchase Additional Shares	With Option to Purchase Additional Shares
Offering price	\$	\$	\$
Underwriting discount and commissions	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$

The expenses of this offering, not including the underwriting discount, are estimated to be approximately \$ and are payable by us. In addition, we have agreed to reimburse the underwriters for certain legal expenses incurred in connection with this offering.

Option to Purchase Additional Shares

We have granted an option to the underwriters, exercisable for 30 days after the date of this Prospectus Supplement, to purchase up to additional shares of Common Stock at the public offering price, less the underwriting discount.

Indemnification of the Underwriters

Pursuant to the underwriting agreement, we have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments that the underwriters or such other indemnified parties may be required to make in respect of those liabilities.

No Sales of Similar Securities by Officers and Directors

Our executive officers and directors have agreed, subject to customary exceptions, not to offer, sell, agree to sell, directly or indirectly, otherwise dispose of or take certain other actions with respect to any shares of Common Stock or any securities convertible into or exchangeable for shares of Common Stock, except for the shares of Common Stock offered in this offering or as otherwise set forth in the lock-up agreement, without the prior written consent of the Representative for a period of 60 days following the closing of this offering. Further, we have agreed, subject to certain exceptions not to offer, sell, agree to sell, directly or indirectly, otherwise dispose of or take certain other actions with respect to any shares of Common Stock or any securities convertible into or exchangeable for shares of Common Stock, except for the shares of Common Stock offered in this offering or as otherwise set forth in the lock-up agreement, without the prior written consent of the Representative for a period of 60 days after the date of this offering.

Nasdaq Listing

Our Common Stock is quoted on Nasdaq under the symbol “NRXP.”

Electronic Distribution

This Prospectus Supplement and the accompanying Base Prospectus may be made available in electronic format on websites or through other online services maintained by the underwriters or by their respective affiliates. In those cases, prospective investors may view offering terms online and prospective investors may be allowed to place orders online. Other than this Prospectus Supplement and the accompanying Base Prospectus in electronic format, the information on the underwriters’ websites or our website and any information contained in any other websites maintained by the underwriter or by us is not part of this Prospectus Supplement, the accompanying Base Prospectus or the registration statement of which this Prospectus Supplement and the accompanying Base Prospectus forms a part, has not been approved and/or endorsed by us or the underwriters in their capacity as underwriters, and should not be relied upon by investors.

Price Stabilization, Short Positions and Penalty Bids

In connection with the offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Exchange Act:

- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.
- Over-allotment involves sales by the underwriters of shares in excess of the number of shares the underwriters are obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares that they may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriters may close out any covered short position by either exercising their over-allotment option and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of the Common Stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which it may purchase shares through the over-allotment option. A naked short position occurs if the underwriters sell more shares than could be covered by the over-allotment option. This position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.
- Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the Common Stock originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our Common Stock or preventing or retarding a decline in the market price of the Common Stock. As a result, the price of our Common Stock may be higher than the price that might otherwise exist in the open market. These transactions may be discontinued at any time.

Neither we nor the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our shares of Common Stock. In addition, neither we nor the underwriters make any representation that the underwriters will engage in these transactions or that any transaction, if commenced, will not be discontinued without notice.

Other Relationships

The underwriters and their respective affiliates are full-service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities.

In the ordinary course of their various business activities, the underwriters and their respective affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively trade securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to our assets, securities and/or instruments (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with us. The underwriters and their respective affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

Offer Restrictions Outside the United States

Other than in the United States, no action has been taken by us or the underwriter that would permit a public offering of the shares of Common Stock offered by this Prospectus Supplement in any jurisdiction where action for that purpose is required. The shares of Common Stock offered by this Prospectus Supplement and the accompanying Base Prospectus may not be offered or sold, directly or indirectly, nor may this Prospectus Supplement or any other offering material or advertisements in connection with the offer and sale of any such shares of Common Stock be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this Prospectus Supplement comes are advised to inform themselves about and to observe any restrictions relating to this offering and the distribution of this Prospectus Supplement. This Prospectus Supplement does not constitute an offer to sell or a solicitation of an offer to buy any shares of Common Stock offered by this Prospectus Supplement in any jurisdiction in which such an offer or a solicitation is unlawful.

Australia

This prospectus is not a disclosure document under Chapter 6D of the Australian Corporations Act, has not been lodged with the Australian Securities and Investments Commission and does not purport to include the information required of a disclosure document under Chapter 6D of the Australian Corporations Act. Accordingly, (i) the offer of the shares of Common Stock under this prospectus is only made to persons to whom it is lawful to offer the shares of Common Stock without disclosure under Chapter 6D of the Australian Corporations Act under one or more exemptions set out in section 708 of the Australian Corporations Act, (ii) this prospectus is made available in Australia only to those persons as set forth in clause (i) above, and (iii) the offeree must be sent a notice stating in substance that by accepting this offer, the offeree represents that the offeree is such a person as set forth in clause (i) above, and, unless permitted under the Australian Corporations Act, agrees not to sell or offer for sale within Australia any of the shares of Common Stock sold to the offeree within 12 months after its transfer to the offeree under this prospectus.

Canada

The shares of Common Stock may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares of Common Stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws. Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor. Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI33-105 regarding underwriter conflicts of interest in connection with this offering.

China

The information in this document does not constitute a public offer of the shares of Common Stock, whether by way of sale or subscription, in the People's Republic of China (excluding, for purposes of this paragraph, Hong Kong Special Administrative Region, Macau Special Administrative Region and Taiwan). The shares of Common Stock may not be offered or sold directly or indirectly in the PRC to legal or natural persons other than directly to "qualified domestic institutional investors."

European Economic Area-Belgium, Germany, Luxembourg and Netherlands

The information in this document has been prepared on the basis that all offers of securities will be made pursuant to an exemption under the Directive 2003/71/EC (“Prospectus Directive”), as implemented in Member States of the European Economic Area (each, a “Relevant Member State”), from the requirement to produce a prospectus for offers of securities.

An offer to the public of securities has not been made, and may not be made, in a Relevant Member State except pursuant to one of the following exemptions under the Prospectus Directive as implemented in that Relevant Member State:

- to legal entities that are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- to any legal entity that has two or more of (i) an average of at least 250 employees during its last fiscal year; (ii) a total balance sheet of more than €43,000,000 (as shown on its last annual unconsolidated or consolidated financial statements) and (iii) an annual net turnover of more than €50,000,000 (as shown on its last annual unconsolidated or consolidated financial statements);
- to fewer than 100 natural or legal persons (other than qualified investors within the meaning of Article 2(1)(e) of the Prospectus Directive) subject to obtaining our prior consent or any underwriter for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of securities shall require us to publish a prospectus pursuant to Article 3 of the Prospectus Directive.

France

This document is not being distributed in the context of a public offering of financial securities (offre au public de titres financiers) in France within the meaning of Article L.411-1 of the French Monetary and Financial Code (Code monétaire et financier) and Articles 211-1 et seq. of the General Regulation of the French Autorité des Marchés Financiers (“AMF”). The shares of Common Stock have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in France.

This document and any other offering material relating to the shares of Common Stock have not been, and will not be, submitted to the AMF for approval in France and, accordingly, may not be distributed or caused to be distributed, directly or indirectly, to the public in France.

Such offers, sales and distributions have been and shall only be made in France to (i) qualified investors (investisseurs qualifiés) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2 and D.411-1 to D.411-3, D. 744-1, D.754-1 and D.764-1 of the French Monetary and Financial Code and any implementing regulation and/or (ii) a restricted number of non-qualified investors (cercle restreint d’investisseurs) acting for their own account, as defined in and in accordance with Articles L.411-2-II-2° and D.411-4, D.744-1, D.754-1 and D.764-1 of the French Monetary and Financial Code and any implementing regulation.

Pursuant to Article 211-3 of the General Regulation of the AMF, investors in France are informed that the shares of Common Stock cannot be distributed (directly or indirectly) to the public by investors otherwise than in accordance with Articles L.411-1, L.411-2, L.412-1 and L.621-8 to L.621-8-3 of the French Monetary and Financial Code.

Ireland

The information in this document does not constitute a prospectus under any Irish laws or regulations and this document has not been filed with or approved by any Irish regulatory authority as the information has not been prepared in the context of a public offering of securities in Ireland within the meaning of the Irish Prospectus (Directive 2003/71/EC) Regulations 2005 (the “Prospectus Regulations”). The shares of Common Stock have not been offered or sold, and will not be offered, sold or delivered directly or indirectly in Ireland by way of a public offering, except to (i) qualified investors as defined in Regulation 2(1) of the Prospectus Regulations and (ii) fewer than 100 natural or legal persons who are not qualified investors.

Israel

The shares of Common Stock offered by this prospectus have not been approved or disapproved by the Israeli Securities Authority (the ISA), or ISA, nor have such securities been registered for sale in Israel. The shares may not be offered or sold, directly or indirectly, to the public in Israel, absent the publication of a prospectus. The ISA has not issued permits, approvals or licenses in connection with this offering or publishing the prospectus; nor has it authenticated the details included herein, confirmed their reliability or completeness, or rendered an opinion as to the quality of the shares of Common Stock being offered. Any resale in Israel, directly or indirectly, to the public of the shares of Common Stock offered by this prospectus is subject to restrictions on transferability and must be effected only in compliance with the Israeli securities laws and regulations.

Italy

The offering of the shares of Common Stock in the Republic of Italy has not been authorized by the Italian Securities and Exchange Commission (Commissione Nazionale per le Società e la Borsa, “CONSOB” pursuant to the Italian securities legislation and, accordingly, no offering material relating to the shares of Common Stock may be distributed in Italy and such securities may not be offered or sold in Italy in a public offer within the meaning of Article 1.1(t) of Legislative Decree No. 58 of 24 February 1998 (“Decree No. 58”), other than:

- to Italian qualified investors, as defined in Article 100 of Decree no. 58 by reference to Article 34-ter of CONSOB Regulation no. 11971 of 14 May 1999 (“Regulation no. 11971”) as amended (“Qualified Investors”); and
- in other circumstances that are exempt from the rules on public offer pursuant to Article 100 of Decree No. 58 and Article 34-ter of Regulation No. 11971 as amended.

Any offer, sale or delivery of the shares of Common Stock or distribution of any offer document relating to the shares of Common Stock in Italy (excluding placements where a Qualified Investor solicits an offer from the issuer) under the paragraphs above must be:

- made by investment firms, banks or financial intermediaries permitted to conduct such activities in Italy in accordance with Legislative Decree No. 385 of 1 September 1993 (as amended), Decree No. 58, CONSOB Regulation No. 16190 of 29 October 2007 and any other applicable laws; and
- in compliance with all relevant Italian securities, tax and exchange controls and any other applicable laws.

Any subsequent distribution of the shares of Common Stock in Italy must be made in compliance with the public offer and prospectus requirement rules provided under Decree No. 58 and the Regulation No. 11971 as amended, unless an exception from those rules applies. Failure to comply with such rules may result in the sale of such securities being declared null and void and in the liability of the entity transferring the shares of Common Stock for any damages suffered by investors.

Japan

The shares of Common Stock have not been and will not be registered under Article 4, paragraph 1 of the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948), as amended (the “FIEL”) pursuant to an exemption from the registration requirements applicable to a private placement of securities to Qualified Institutional Investors (as defined in and in accordance with Article 2, paragraph 3 of the FIEL and the regulations promulgated thereunder). Accordingly, the shares of Common Stock may not be offered or sold, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan other than Qualified Institutional Investors. Any Qualified Institutional Investor who acquires securities may not resell them to any person in Japan that is not a Qualified Institutional Investor, and acquisition by any such person of securities is conditional upon the execution of an agreement to that effect.

New Zealand

The shares of Common Stock offered hereby have not been offered or sold, and will not be offered or sold, directly or indirectly in New Zealand and no offering materials or advertisements have been or will be distributed in relation to any offer of shares in New Zealand, in each case other than:

- to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money;
- to persons who in all the circumstances can properly be regarded as having been selected otherwise than as members of the public;
- to persons who are each required to pay a minimum subscription price of at least NZ\$500,000 for the shares before the allotment of those shares (disregarding any amounts payable, or paid, out of money lent by the issuer or any associated person of the issuer); or
- in other circumstances where there is no contravention of the Securities Act 1978 of New Zealand (or any statutory modification or reenactment of, or statutory substitution for, the Securities Act 1978 of New Zealand).

Portugal

This document is not being distributed in the context of a public offer of financial securities (oferta pública de valores mobiliários) in Portugal, within the meaning of Article 109 of the Portuguese Securities Code (Código dos Valores Mobiliários). The shares of Common Stock have not been offered or sold and will not be offered or sold, directly or indirectly, to the public in Portugal. This document and any other offering material relating to the shares of Common Stock have not been, and will not be, submitted to the Portuguese Securities Market Commission (Comissão do Mercado de Valores Mobiliários) for approval in Portugal and, accordingly, may not be distributed or caused to be distributed, directly or indirectly, to the public in Portugal, other than under circumstances that are deemed not to qualify as a public offer under the Portuguese Securities Code. Such offers, sales and distributions of securities in Portugal are limited to persons who are “qualified investors” (as defined in the Portuguese Securities Code). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Sweden

This document has not been, and will not be, registered with or approved by Finansinspektionen (the Swedish Financial Supervisory Authority). Accordingly, this document may not be made available, nor may the shares of Common Stock be offered for sale in Sweden, other than under circumstances that are deemed not to require a prospectus under the Swedish Financial Instruments Trading Act (1991:980) (Sw. lag (1991:980) om handel med finansiella instrument). Any offering of securities in Sweden is limited to persons who are “qualified investors” (as defined in the Financial Instruments Trading Act). Only such investors may receive this document and they may not distribute it or the information contained in it to any other person.

Switzerland

The shares of Common Stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (“SIX”) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering material relating to the shares of Common Stock may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering material relating to the shares of Common Stock have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares of Common Stock will not be supervised by, the Swiss Financial Market Supervisory Authority (FINMA).

This document is personal to the recipient only and not for general circulation in Switzerland.

United Arab Emirates

Neither this document nor the shares of Common Stock have been approved, disapproved or passed on in any way by the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates, nor have we received authorization or licensing from the Central Bank of the United Arab Emirates or any other governmental authority in the United Arab Emirates to market or sell the shares of Common Stock within the United Arab Emirates. This document does not constitute and may not be used for the purpose of an offer or invitation. We may not render services relating to the shares of Common Stock within the United Arab Emirates, including the receipt of applications and/or the allotment or redemption of such shares.

No offer or invitation to subscribe for securities is valid or permitted in the Dubai International Financial Centre.

United Kingdom

Neither the information in this document nor any other document relating to the offer has been delivered for approval to the Financial Services Authority in the United Kingdom and no prospectus (within the meaning of section 85 of the Financial Services and Markets Act 2000, as amended (“FSMA”)) has been published or is intended to be published in respect of the shares of Common Stock. This document is issued on a confidential basis to “qualified investors” (within the meaning of section 86(7) of FSMA) in the United Kingdom, and the shares of Common Stock may not be offered or sold in the United Kingdom by means of this document, any accompanying letter or any other document, except in circumstances which do not require the publication of a prospectus pursuant to section 86(1) FSMA. This document should not be distributed, published or reproduced, in whole or in part, nor may its contents be disclosed by recipients to any other person in the United Kingdom.

Any invitation or inducement to engage in investment activity (within the meaning of section 21 of FSMA) received in connection with the issue or sale of the shares of Common Stock has only been communicated or caused to be communicated and will only be communicated or caused to be communicated in the United Kingdom in circumstances in which section 21(1) of FSMA does not apply us.

In the United Kingdom, this document is being distributed only to, and is directed at, persons (i) who have professional experience in matters relating to investments falling within Article 19(5) (investment professionals) of the Financial Services and Markets Act 2000 (Financial Promotions) Order 2005 (“FPO”), (ii) who fall within the categories of persons referred to in Article 49(2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the FPO or (iii) to whom it may otherwise be lawfully communicated (together “relevant persons”). The investments to which this document relates are available only to, and any invitation, offer or agreement to purchase will be engaged in only with, relevant persons. Any person who is not a relevant person should not act or rely on this document or any of its contents.

LEGAL MATTERS

Certain legal matters relating to the validity of our common stock to be offered under this Prospectus Supplement have been passed upon for us by Cozen O'Connor, New York, New York. The underwriters are being represented by Duane Morris LLP, New York, New York.

EXPERTS

The consolidated financial statements of the Company as of December 31, 2025 and for the year then ended, incorporated in this Prospectus Supplement by reference from the Company's Annual Report on Form 10-K, for the year ended December 31, 2025, have been audited by Weinberg & Company P.A., an independent registered public accounting firm, as stated in their report thereon (which report contains an explanatory paragraph regarding the ability of the Company to continue as a going concern), and have been incorporated by reference in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

The consolidated financial statements of the Company as of December 31, 2024 and for the year then ended, incorporated in this Prospectus Supplement by reference from the Company's Annual Report on Form 10-K, for the year ended December 31, 2025, have been audited by Salberg & Company, P.A., an independent registered public accounting firm, as stated in their report thereon (which report contains an explanatory paragraph regarding the ability of the Company to continue as a going concern), and have been incorporated by reference in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly, and current reports, proxy statements, and other information with the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities offered by this Prospectus Supplement. This Prospectus Supplement and the accompanying Base Prospectus, which constitute a part of the registration statement, do not contain all of the information in the registration statement. For further information about us and the securities offered by this Prospectus Supplement, we refer you to the registration statement and the exhibits filed as part of the registration statement. You may read the registration statement as well as our reports, proxy statements and other documents we file with the SEC over the internet at the SEC's website at <https://www.sec.gov>.

We also maintain a website at www.nrxpharma.com, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. We have not incorporated by reference into this Prospectus Supplement, the accompanying Base Prospectus or the registration statement, the information on our website, and you should not consider it to be a part of this Prospectus Supplement, the accompanying Base Prospectus or the registration statement.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this Prospectus Supplement. Information that we file later with the SEC will automatically update and supersede information in this Prospectus Supplement. In all cases, you should rely on the later information over different information included in this Prospectus Supplement. The following documents have been filed by us with the SEC and are incorporated by reference into this Prospectus Supplement:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2025, filed with the SEC on [March 23, 2026](#);
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2026, filed with the SEC on [May 15, 2026](#);
- our Current Report on Form 8-K and 8-K/A filed with the SEC on [January 16, 2026](#), [February 2, 2026](#), [February 17, 2026](#), [February 17, 2026](#) and [March 24, 2026](#); and

- the description of our Common Stock contained in or incorporated into our [Registration Statement on Form 8-A, filed with the SEC on November 20, 2017](#), and any amendment or report updating that description.

All reports and other documents that we subsequently file with the SEC (other than any portion of such filings that are furnished under applicable SEC rules rather than filed) pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this Prospectus Supplement and before the completion of the Offering will be deemed to be incorporated by reference into this Prospectus Supplement and the accompanying Base Prospectus and to be part of this Prospectus Supplement and the accompanying Base Prospectus from the date of filing of such reports and documents.

You should not assume that the information in this Prospectus Supplement and the accompanying Base Prospectus, or any document incorporated by reference herein or therein is accurate as of any date other than the date of the applicable document. Any statement contained in a document incorporated or deemed to be incorporated by reference into this Prospectus Supplement and the accompanying Base Prospectus will be deemed to be modified or superseded for purposes of this Prospectus Supplement to the extent that a statement contained in this Prospectus Supplement or the accompanying Base Prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this Prospectus Supplement modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this Prospectus Supplement.

You may request a copy of any or all documents referred to above that have been or may be incorporated by reference into this Prospectus Supplement (excluding certain exhibits to the documents) at no cost, by writing or calling us at the following address or telephone number:

NRx Pharmaceuticals, Inc.
Michael Abrams
Chief Financial Officer
1201 North Market Street, Suite 111
Wilmington, Delaware 19801
(484) 254-6134



\$150,000,000

**COMMON STOCK
PREFERRED STOCK
DEBT SECURITIES
DEPOSITARY SHARES
WARRANTS
RIGHTS
PURCHASE CONTRACTS
UNITS**

From time to time, we may offer and sell, in one or more offerings, up to \$150 million of our common stock, par value \$0.001 per share (the “*Common Stock*”), shares of our preferred stock, debt securities, depositary shares, warrants, rights, purchase contracts or units, or any combination thereof. We may also offer securities as may be issuable upon conversion, repurchase, exchange or exercise of any securities registered hereunder, including any applicable anti-dilution provisions.

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

Our Common Stock is listed on The Nasdaq Capital Market, which we sometimes refer to herein as “Nasdaq,” under the symbol “NRXP.” On December 19, 2025, the closing price of our Common Stock was \$2.37 per share.

We may offer and sell our securities to or through one or more agents, underwriters, dealers or other third parties or directly to one or more purchasers on a continuous or delayed basis. If agents, underwriters or dealers are used to sell our securities, we will name them and describe their compensation in a prospectus supplement. The price to the public of our securities and the net proceeds we expect to receive from the sale of such securities will also be set forth in a prospectus supplement. For additional information on the methods of sale, you should refer to the section entitled “Plan of Distribution” in this prospectus.

Our business and investing in our securities involves significant risks. You should review carefully the risks and uncertainties referenced under the heading “Risk Factors” on page 3 of this prospectus, as well as those contained in the applicable prospectus supplement and any related free writing prospectus, and in the other documents that are incorporated by reference into this prospectus or the applicable prospectus supplement.

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

The date of this prospectus is December 22, 2025

TABLE OF CONTENTS

	<u>PAGE</u>
ABOUT THIS PROSPECTUS	1
PROSPECTUS SUMMARY	2
RISK FACTORS	3
CAUTIONARY NOTES REGARDING FORWARD-LOOKING STATEMENTS	4
USE OF PROCEEDS	5
DESCRIPTION OF OUR CAPITAL STOCK	6
DESCRIPTION OF THE DEBT SECURITIES	9
DESCRIPTION OF THE DEPOSITARY SHARES	18
DESCRIPTION OF THE WARRANTS	21
DESCRIPTION OF THE RIGHTS	22
DESCRIPTION OF THE PURCHASE CONTRACTS	23
DESCRIPTION OF THE UNITS	23
DESCRIPTION OF CERTAIN PROVISIONS OF DELAWARE LAW AND OUR CERTIFICATE OF INCORPORATION AND BYLAWS	24
PLAN OF DISTRIBUTION	25
LEGAL MATTERS	27
EXPERTS	27
WHERE YOU CAN FIND MORE INFORMATION	28
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	28

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement filed with the Securities and Exchange Commission (the “SEC”), using a “shelf” registration process. Under this shelf registration process, we may sell the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities which may be offered. Each time we offer securities for sale, we will provide a prospectus supplement that contains information about the specific terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to these offerings. Any prospectus supplement or free writing prospectus may also add or update information contained in this prospectus. If there is any inconsistency between the information in this prospectus and the applicable prospectus supplement or free writing prospectus, you should rely on the prospectus supplement or free writing prospectus, as applicable. You should read both this prospectus and any prospectus supplement together with additional information described below under “*Where You Can Find More Information*” and “*Incorporation of Certain Information by Reference*.”

You should rely only on the information contained or incorporated by reference in this prospectus, and in any prospectus supplement or free writing prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making offers to sell or solicitations to buy the securities described in this prospectus in any jurisdiction in which an offer or solicitation is not authorized, or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should not assume that the information in this prospectus or any prospectus supplement, as well as the information we file or previously filed with the SEC that we incorporate by reference in this prospectus or any prospectus supplement, is accurate as of any date other than its respective date. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading “*Where You Can Find More Information*.”

PROSPECTUS SUMMARY

This summary highlights information contained in this prospectus, or incorporated by reference into this prospectus, and does not contain all of the information that you should consider in making your investment decision. Before investing in our securities, you should carefully read this entire prospectus, including the information set forth under the section entitled “Risk Factors,” as well as our consolidated financial statements, the related notes thereto, and other information incorporated by reference into this prospectus. Some of the statements in this prospectus and the information incorporated by reference into this prospectus constitute forward-looking statements. For additional information, refer to the section entitled “Cautionary Notes Regarding Forward-Looking Statements.”

Unless the context requires otherwise, the words “we,” “us,” “our,” the “Company,” “NRx Pharmaceuticals,” and “NRx” refer to NRx Pharmaceuticals, Inc., a Delaware corporation, and its wholly owned subsidiaries, NeuroRx, Inc., (“NeuroRx”), Dura Medical, LLC (“Dura”) and HOPE Therapeutics, Inc. (“HOPE”).

Overview

NRx is a clinical-stage bio-pharmaceutical company which develops and will distribute, through its wholly-owned operating subsidiary, NeuroRx, novel therapeutics for the treatment of central nervous system disorders including suicidal depression, chronic pain, and post-traumatic stress disorder (“PTSD”) and schizophrenia. NRx is additionally the founder and majority owner of HOPE, a medical services company that offers interventional psychiatry care to patients with treatment-resistant depression and PTSD with a combination of neuroplastic drugs, transcranial magnetic stimulation (“TMS”), digital therapeutics, and hyperbaric therapy. All of our current drug development activities are focused on drugs that enhance neuroplasticity by modulating the N-methyl-D-aspartate (“NMDA”) receptor in the brain and nervous system, a neurochemical pathway that has been disclosed in detail in our annual filings. The Company has two lead drug candidates – NRX-100, a preservative-free formulation of ketamine for intravenous infusion, and NRX-101, an oral fixed dose combination of D-cycloserine (“DCS”) and lurasidone.

Risk Factors

Our business is subject to substantial risk. Please carefully review the section entitled “Risk Factors” beginning on page 3 of this prospectus for a discussion of the factors you should carefully consider before deciding to purchase the securities offered by this prospectus.

Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations. You should be able to bear a complete loss of your investment.

Implications of Being a Smaller Reporting Company

As a “smaller reporting company,” as defined in Rule 12b-2 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), in addition to providing reduced disclosure about our executive compensation arrangements and business developments, among other reduced disclosure requirements available to smaller reporting companies, we present only two years of audited financial statements in addition to any required unaudited interim financial statements with correspondingly reduced “Management’s Discussion and Analysis of Financial Condition and Results of Operations” disclosure.

We have taken advantage of reduced reporting requirements in this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies in which you hold stock.

Corporate Information

We were incorporated under the laws of the State of Delaware on September 18, 2017 under the name Big Rock Partners Acquisition Corp. Upon the closing of the business combination with NeuroRx, Inc. on May 24, 2021, we changed our name to NRx Pharmaceuticals, Inc. Our principal executive offices are located at 1201 Orange Street, Suite 600, Wilmington, Delaware 19801, our mailing address is 1201 North Market Street, Suite 111, Wilmington, Delaware 19801 and our telephone number is (484) 254-6134. Our website address is www.nrxpharma.com. The information contained on, or accessible through, our website does not constitute a part of and is not incorporated by reference in this prospectus, or the registration statement of which it forms a part. We have included our website address in this prospectus solely as an inactive textual reference.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before deciding whether to purchase any of our securities, you should carefully consider the risks and uncertainties described under “*Risk Factors*” contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in our Annual Report on Form 10-K for the fiscal year ended December 31, 2024 filed with the SEC on March 14, 2025, as updated by our subsequent filings with the SEC, which are incorporated by reference herein. If any of these risks actually occur, our business, financial condition and results of operations could be materially and adversely affected and we may not be able to achieve our goals, the value of our securities could decline and you could lose some or all of your investment. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. If any of these risks occur, the trading price of our Common Stock could decline materially and you could lose all or part of your investment.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein include “forward-looking statements” within the meaning of the “safe harbor” provisions of the U.S. Private Securities Litigation Reform Act of 1995, which may include, but are not limited to, statements regarding our financial outlook, product development, business prospects, and market and industry trends and conditions, as well as our strategies, plans, objectives, and goals. These forward-looking statements are based on current beliefs, expectations, estimates, forecasts, and projections of, as well as assumptions made by, and information currently available to, our management. Words such as “expect,” “anticipate,” “should,” “believe,” “hope,” “target,” “project,” “goals,” “estimate,” “potential,” “predict,” “may,” “will,” “might,” “could,” “would,” “seek,” “plan,” “intend,” “shall,” and variations of these terms or the negative of these terms and similar expressions are intended to identify these forward-looking statements. These forward-looking statements are, by their nature, subject to significant risks and uncertainties, many of which involve factors or circumstances that are beyond our control. These risks and uncertainties include, but are not limited to:

- our relatively limited operating history;
- our ability to expand, retain and motivate our employees and manage our growth;
- risks associated with general industry conditions and competition;
- general economic factors, including interest rate and currency exchange rate fluctuations;
- the impact of pharmaceutical industry regulation and health care legislation in the United States and internationally;
- technological advances, new products and patents attained by competitors;
- challenges inherent in new product development, including obtaining regulatory approval;
- our ability to accurately predict future market conditions;
- manufacturing difficulties or delays;
- changes in laws, rules or regulations relating to any aspect of our business operations, or general economic, market and business conditions;
- financial instability of international economies and sovereign risk;
- dependence on the effectiveness of our patents and other protections for innovative products; and
- the exposure to litigation, including patent litigation, and/or regulatory actions.

Furthermore, there can be no guarantees with respect to pipeline products that the products will receive the necessary regulatory approvals or that they will prove to be commercially successful. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements. We assume no obligation and do not intend to update or otherwise revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by applicable law. As a result of these and other risks, uncertainties and assumptions, forward-looking events and circumstances discussed herein might not occur in the way that our management expects, if at all. Accordingly, you should not place reliance on any forward-looking statement, and all forward-looking statements are herein qualified by reference to the cautionary statements set forth above.

You should read this prospectus, any prospectus supplement and the documents incorporated herein and those documents filed as exhibits to the registration statement, of which this prospectus is a part, with the understanding that our actual future results, levels of activity, performance and achievements may be materially different from what we expect.

USE OF PROCEEDS

We cannot assure you that we will receive any proceeds in connection with securities which may be offered pursuant to this prospectus. Unless otherwise provided in the applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities under this prospectus primarily for working capital and general corporate purposes to support our growth.

Investors are cautioned, however, that expenditures may vary substantially from these uses. Investors will be relying on the judgment of our management, who will have broad discretion regarding the application of the proceeds of this offering. The amounts and timing of our actual expenditures will depend upon numerous factors, including the amount of cash generated by our operations, the amount of competition and other operational factors. We may find it necessary or advisable to use portions of the proceeds from this offering for other purposes.

From time to time, we evaluate these and other factors and we anticipate continuing to make such evaluations to determine if the existing allocation of resources, including the proceeds of this offering, is being optimized. Pending these uses, we may invest the net proceeds from this offering in short-term, investment-grade interest-bearing securities such as money market accounts, certificates of deposit, commercial paper and guaranteed obligations of the U.S. government. We cannot predict whether the proceeds invested will yield a favorable return.

DESCRIPTION OF OUR CAPITAL STOCK

General

The following description summarizes the material terms of the terms of our securities and is not intended to be a complete summary of the rights and preferences of such securities. The full text of our Second Amended and Restated Certificate of Incorporation (the “*Charter*”) and our Second Amended and Restated Bylaws (the “*Bylaws*”) are incorporated by reference in the registration statement of which this prospectus forms a part. You are encouraged to read the applicable provisions our Articles of Incorporation and Bylaws in their entirety for a complete description of the rights and preferences of our securities. See “Incorporation of Certain Information by Reference.”

Capital Stock

Our authorized capital stock consists of 500,000,000 shares of Common Stock, par value \$0.001 per share, and 50,000,000 shares of preferred stock, par value \$0.001 per share. As of December 11, 2025, there were 29,605,150 shares of Common Stock outstanding. No shares of preferred stock have been issued or are outstanding. Unless our board of directors (the “*Board*”) determines otherwise, we will issue all shares of our capital stock in uncertificated form.

Common Stock

Holders of shares of Common Stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders. The holders of Common Stock do not have cumulative voting rights in the election of directors. In the event of our liquidation, dissolution or winding up and after payment in full of all amounts required to be paid to creditors and to any future holders of preferred stock having liquidation preferences, if any, the holders of Common Stock will be entitled to receive pro rata our remaining assets available for distribution. Holders of Common Stock do not have preemptive, subscription, redemption or conversion rights. There are no redemption or sinking fund provisions applicable to the Common Stock. The rights, powers, preferences and privileges of holders of the Common Stock are subject to those of the holders of any shares of preferred stock that the Board may authorize and issue in the future.

Preferred Stock

Under the terms of the Charter, our Board is authorized to direct us to issue shares of preferred stock in one or more series without stockholder approval. Our Board has the discretion to determine the rights, powers, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

The purpose of authorizing our Board to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of the outstanding voting stock. Additionally, the issuance of preferred stock may adversely affect the holders of Common Stock by restricting dividends on the Common Stock, diluting the voting power of the Common Stock or subordinating the liquidation rights of the Common Stock. As a result of these or other factors, the issuance of preferred stock could have an adverse impact on the market price of the Common Stock. No shares of preferred stock are currently outstanding.

Dividends

Declaration and payment of any dividend is subject to the discretion of our Board. The time and amount of dividends is dependent upon, among other things, our business prospects, results of operations, financial condition, cash requirements and availability, debt repayment obligations, capital expenditure needs, contractual restrictions, covenants in the agreements governing current and future indebtedness, industry trends, the provisions of Delaware law affecting the payment of dividends and distributions to stockholders and any other factors or considerations our Board may regard as relevant.

We currently intend to retain all available funds and any future earnings to fund the development and growth of our business, and therefore do not anticipate declaring or paying any cash dividends on Common Stock in the foreseeable future.

Anti-Takeover Provisions

The Charter and Bylaws contain provisions that may delay, defer or discourage another party from acquiring control of us. We expect that these provisions, which are summarized below, will discourage coercive takeover practices or inadequate takeover bids.

These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our Board, which may result in an improvement of the terms of any such acquisition in favor of our stockholders. However, they also give our Board the power to discourage acquisitions that some stockholders may favor.

Authorized but Unissued Shares

The authorized but unissued shares of Common Stock and preferred stock are available for future issuance without stockholder approval, subject to any limitations imposed by the listing standards of Nasdaq. These additional shares may be used for a variety of corporate finance transactions, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved Common Stock and preferred stock could make more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Classified Board of Directors

Our Charter provides that our Board is divided into three classes of directors, with the classes to be as nearly equal in number as possible, and with each director serving a three-year term. As a result, approximately one-third of our Board will be elected each year. The classification of directors has the effect of making it more difficult for stockholders to change the composition of our Board.

Stockholder Action; Special Meetings of Stockholders

Our Charter provides that, if Jonathan Javitt and Daniel Javitt own at least a majority of the shares of the Common Stock, stockholders may not take action by written consent, but may only take action at annual or special meetings of stockholders. As a result, a holder controlling a majority of capital stock would not be able to amend the Bylaws or remove directors without holding a meeting of stockholders called in accordance with the Bylaws. Further, our Charter provides that only the chairperson of our Board, a majority of our Board, our Chief Executive Officer or our President may call special meetings of stockholders, thus prohibiting a stockholder from calling a special meeting. These provisions might delay the ability of stockholders to force consideration of a proposal or for stockholders controlling a majority of capital stock to take any action, including the removal of directors.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

In addition, our Bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting or special meeting of stockholders. Generally, in order for any matter to be “properly brought” before a meeting, the matter must be (a) specified in a notice of meeting given by or at the direction of our Board, (b) if not specified in a notice of meeting, otherwise brought before the meeting by our Board or the chairperson of the meeting, or (c) otherwise properly brought before the meeting by a stockholder present in person who (i) was a stockholder both at the time of giving the notice and at the time of the meeting, (ii) is entitled to vote at the meeting, and (iii) has complied with the advance notice procedures specified in our Bylaws or properly made such proposal in accordance with Rule 14a-8 under the Exchange Act and the rules and regulations thereunder, which proposal has been included in the proxy statement for the annual meeting. Further, for business to be properly brought before an annual meeting by a stockholder, the stockholder must (a) provide Timely Notice in writing and in proper form to the secretary and (b) provide any updates or supplements to such notice at the times and in the forms required by our Bylaws. To be timely, a stockholder’s notice must be delivered to, or mailed and received at, our principal executive offices not less than 90 days nor more than 120 days prior to the one-year anniversary of the preceding year’s annual meeting; *provided, however*, that if the date of the annual meeting is more than 30 days before or more than 60 days after such anniversary date, notice by the stockholder to be timely must be so delivered, or mailed and received, not later than the 90th day prior to such annual meeting or, if later, the 10th day following the day on which public disclosure of the date of such annual meeting was first made (such notice within such time periods, “*Timely Notice*”).

Stockholders at an annual meeting or special meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our Board or by a qualified stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely written notice in proper form to our secretary of the stockholder’s intention to bring such business before the meeting. These provisions could have the effect of delaying stockholder actions that are favored by the holders of a majority of the outstanding voting securities until the next stockholder meeting.

Amendment of Charter or Bylaws

Our Bylaws may be amended or repealed by a majority vote of our Board or by the holders of at least sixty-six and two-thirds percent (66 $\frac{2}{3}$ %) of the voting power of all of the then-outstanding shares entitled to vote generally in the election of directors, voting together as a single class. The affirmative vote of a majority of our Board and at least sixty-six and two-thirds percent (66 $\frac{2}{3}$ %) in voting power of the outstanding shares entitled to vote would be required to amend certain provisions of our Charter.

Limitations on Liability and Indemnification of Officers and Directors

Our Charter and Bylaws provide indemnification and advancement of expenses for our directors and officers to the fullest extent permitted by the Delaware General Corporation Law, as amended (the “DGCL”), subject to certain limited exceptions. We have entered into indemnification agreements with each of our directors and officers. In some cases, the provisions of those indemnification agreements may be broader than the specific indemnification provisions contained under Delaware law. In addition, as permitted by Delaware law, our Charter and Bylaws include provisions that eliminate the personal liability of directors for monetary damages resulting from breaches of certain fiduciary duties as a director. The effect of this provision is to restrict our rights and the rights of our stockholders in derivative suits to recover monetary damages against a director for breach of fiduciary duties as a director. These provisions may be held not to be enforceable for violations of the federal securities laws of the United States.

Dissenters’ Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our stockholders have appraisal rights in connection with a merger or consolidation of our company. Pursuant to Section 262 of the DGCL, stockholders who properly demand and perfect appraisal rights in connection with such merger or consolidation have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery.

Stockholders’ Derivative Actions

Under the DGCL, any of our stockholders may bring an action in our name to procure a judgment in its favor, also known as a derivative action, provided that the stockholder bringing the action is a holder of the our shares at the time of the transaction to which the action relates.

Forum Selection

Our Charter and Bylaws provide that unless we consent in writing to the selection of an alternative forum, the (a) Chancery Court of the State of Delaware (or, in the event that the Chancery Court does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for: (i) any derivative action brought by a stockholder on our behalf, (ii) any action, suit or proceeding asserting a claim of breach of fiduciary duty owed by any of our directors, officers, stockholders to us or to our stockholders, (iii) any action, suit or proceeding asserting a claim arising pursuant to the DGCL, the Charter or the Bylaws, or (iv) any action, suit or proceeding asserting a claim governed by the internal affairs doctrine; and (b) subject to the foregoing, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Notwithstanding the foregoing, such forum selection provisions shall not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts of the United States have exclusive jurisdiction. The choice of forum provision may limit a stockholder’s ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage such lawsuits against us and our directors, officers, and other employees. Alternatively, if a court were to find the choice of forum provision contained in the Charter to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations, and financial condition.

Additionally, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. As noted above, the Charter and the Bylaws will provide that the federal district courts of the United States of America shall have jurisdiction over any action arising under the Securities Act. Accordingly, there is uncertainty as to whether a court would enforce such provision. Our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

Transfer Agent and Registrar

The transfer agent and registrar for the Common Stock is Continental Stock Transfer & Trust Company, One State Street Plaza, New York, New York 10004.

Trading Symbol and Market

Our Common Stock is listed on Nasdaq under the symbol “NRXP” and certain of our warrants are listed on Nasdaq under the symbol “NRXPW”.

DESCRIPTION OF THE DEBT SECURITIES

The following description of the terms of the debt securities sets forth certain general terms and provisions of the debt securities to which any prospectus supplement may relate. The particular terms of the debt securities offered by any prospectus supplement and the extent, if any, to which these general provisions may apply to those debt securities will be described in the prospectus supplement relating to those debt securities. Accordingly, for a description of the terms of a particular issue of debt securities, reference must be made to both the prospectus supplement relating thereto and to the following description.

We may issue debt securities from time to time in one or more series. The debt securities will be general obligations of NRx Pharmaceuticals, Inc. The debt securities may be fully and unconditionally guaranteed on a secured or unsecured senior or subordinated basis, jointly and severally, by guarantors, if any. In the event that any series of debt securities will be subordinated to other indebtedness that we have outstanding or may incur, the terms of the subordination will be set forth in the prospectus supplement relating to the subordinated debt securities.

The debt securities will be issued under an indenture between us and a trustee to be named in the applicable indenture. The following discussion of certain provisions of the indenture is a summary only and should not be considered a complete description of the terms and provisions of the indenture. Accordingly, the following discussion is qualified in its entirety by reference to the provisions of the indenture, including the definition of certain terms used below. The form of the indenture has been filed as an exhibit to the registration statement of which this prospectus forms a part and you should read the indenture for provisions that may be important to you.

As used in this section only, “Nrx,” “we,” “our” or “us” refer to NRx Pharmaceuticals, Inc. excluding our subsidiaries, unless expressly stated or the context otherwise requires.

General

The debt securities will represent direct, general obligations of NRx and:

- may rank equally with other unsubordinated debt or may be subordinated to other debt we have or may incur;
- may be issued in one or more series with the same or various maturities;
- may be issued at a price of 100% of their principal amount or at a premium or discount;
- may be issued in registered or bearer form and certificated or uncertificated form; and
- may be represented by one or more global debt securities registered in the name of a designated depository’s nominee, and if so, beneficial interests in the global note will be shown on and transfers will be made only through records maintained by the designated depository and its participants.

The aggregate principal amount of debt securities that we may authenticate and deliver is unlimited. Subject to limitations contained in the indenture, we may from time to time, without notice to or the consent of the holders of a series of debt securities, issue additional debt securities of any such series on the same terms and conditions as the debt securities of such series, except for any differences in the issue price and, if applicable, the initial interest accrual date and interest payment date; *provided* that if the additional debt securities are not fungible with the debt securities of such series for U.S. federal income tax purposes, such additional debt securities will have one or more separate CUSIP numbers. You should refer to the applicable prospectus supplement for the following terms of the debt securities of the series with respect to which that prospectus supplement is being delivered:

- the title of the debt securities of the series (which will distinguish the debt securities of that particular series from the debt securities of any other series) and ranking (including the terms of any subordination provisions);
- the price or prices of the debt securities of the series at which such debt securities will be issued;
- whether the debt securities are entitled to the benefit of any guarantee by any guarantor;
- any limit on the aggregate principal amount of the debt securities of the series that may be authenticated and delivered under the indenture (except for debt securities authenticated and delivered upon registration or transfer of, or in exchange for, or in lieu of, other debt securities of the series);
- the date or dates on which the principal and premium with respect to the debt securities of the series are payable;

- the person to whom any interest on a security of the series shall be payable if other than the person in whose name that security is registered at the close of business on the record date;
- the rate or rates (which may be fixed or variable) at which the debt securities of the series will bear interest (if any) or the method of determining such rate or rates (including, but not limited to, any commodity, commodity index, stock exchange index or financial index), the date or dates from which such interest, if any, will accrue, the interest payment dates on which such interest, if any, will be payable or the method by which such dates will be determined, the record dates for the determination of holders thereof to whom such interest is payable (in the case of securities in registered form), and the basis upon which interest will be calculated if other than that of a 360-day year of twelve 30-day months;
- the currency or currencies in which debt securities of the series will be denominated and/or in which payment of the principal, premium, if any, and interest of any of the securities shall be payable, if other than U.S. dollars, the place or places, if any, in addition to or instead of the corporate trust office of the trustee (in the case of securities in registered form) where the principal, premium and interest, if any, with respect to debt securities of the series will be payable, where notices and demands to or upon us in respect of the debt securities and the indenture may be delivered, and the method of such payment, if by wire transfer, mail or other means;
- the price or prices at which, the period or periods within which, and the terms and conditions upon which debt securities of the series may be redeemed, in whole or in part, at our option or otherwise;
- whether debt securities of the series are to be issued as securities in registered form or securities in bearer form or both and, if securities in bearer form are to be issued, whether coupons will be attached to them, whether securities in bearer form of the series may be exchanged for securities in registered form of the series, and the circumstances under which and the places at which any such exchanges, if permitted, may be made;
- if any debt securities of the series are to be issued as securities in bearer form or as one or more global securities representing individual securities in bearer form of the series, whether certain provisions for the payment of additional interest or tax redemptions will apply; whether interest with respect to any portion of a temporary bearer security of the series payable with respect to any interest payment date prior to the exchange of such temporary bearer security for definitive securities in bearer form of the series will be paid to any clearing organization with respect to the portion of such temporary bearer security held for its account and, in such event, the terms and conditions (including any certification requirements) upon which any such interest payment received by a clearing organization will be credited to the persons entitled to interest payable on such interest payment date; and the terms upon which a temporary bearer security may be exchanged for one or more definitive securities in bearer form of the series;
- the obligation or right, if any, to redeem, purchase or repay debt securities of the series pursuant to any sinking fund or analogous provisions or at the option of a holder of such debt securities and the price or prices at which, the period or periods within which, and the terms and conditions upon which, debt securities of the series will be redeemed, purchased or repaid, in whole or in part, pursuant to such obligations;
- the terms, if any, upon which the debt securities of the series may be convertible into or exchanged for any issuer's common stock, preferred stock, depositary shares, other debt securities or warrants for common stock, preferred stock, depositary shares, indebtedness or other securities of any kind and the terms and conditions upon which such conversion or exchange will be effected, including the initial conversion or exchange price or rate, the conversion or exchange period and any other additional provisions;
- if other than minimum denominations of \$2,000 or any integral multiple of \$1,000 in excess thereof, the denominations in which debt securities of the series will be issuable;
- if the amount of principal, premium or interest with respect to the debt securities of the series may be determined with reference to an index or pursuant to a formula, the manner in which such amounts will be determined;
- if the principal amount payable at the stated maturity of debt securities of the series will not be determinable as of any one or more dates prior to such stated maturity, the amount that will be deemed to be such principal amount as of any such date for any purpose, including the principal amount thereof which will be due and payable upon any maturity other than the stated maturity or which will be deemed to be outstanding as of any such date (or, in any such case, the manner in which such deemed principal amount is to be determined), and if necessary, the manner of determining the equivalent thereof in U.S. dollars;

- any changes or additions to the provisions of the indenture dealing with defeasance;
- if other than the principal amount thereof, the portion of the principal amount of debt securities of the series that will be payable upon declaration of acceleration of the maturity thereof or provable in bankruptcy;
- the terms, if any, of the transfer, mortgage, pledge or assignment as security for the debt securities of the series of any properties, assets, moneys, proceeds, securities or other collateral and any corresponding changes to provisions of the indenture as then in effect;
- any addition to or change in the events of default with respect to the debt securities of the series and any change in the right of the trustee or the holders to declare the principal, premium and interest, if any, with respect to such debt securities due and payable;
- if the debt securities of the series will be issued in whole or in part in the form of a global security, the terms and conditions, if any, upon which such global security may be exchanged in whole or in part for other individual debt securities in definitive registered form, the depositary (as defined in the applicable prospectus supplement) for such global security and the form of any legend or legends to be borne by any such global security in addition to or in lieu of the legend referred to in the indenture;
- any trustee, authenticating or paying agent, transfer agent or registrar or any other agent with respect to the debt securities;
- the applicability of, and any addition to, deletion of or change in, the covenants and definitions then set forth in the indenture or in the terms then set forth in the indenture relating to permitted consolidations, mergers or sales of assets;
- the terms, if any, of any guarantee of the payment of principal, premium and interest with respect to debt securities of the series and any corresponding changes to the provisions of the indenture as then in effect;
- the subordination, if any, of the debt securities of the series pursuant to the indenture and any changes or additions to the provisions of the indenture relating to subordination;
- with regard to debt securities of the series that do not bear interest, the dates for certain required reports to the trustee;
- any provisions granting special rights to holders when a specified event occurs;
- any co-issuer;
- the place or places where the principal of and interest, if any, on the debt securities will be payable, where the debt securities may be surrendered for registration of transfer or exchange and where notices and demands to or upon us in respect of the debt securities and the indenture may be served, and the method of such payment, if by wire transfer, mail or other means; and
- any other terms of the debt securities of the series (which terms will not be prohibited by the provisions of the indenture).

The prospectus supplement will also describe any material U.S. federal income tax consequences or other special considerations applicable to the series of debt securities to which such prospectus supplement relates, including those applicable to:

- securities in bearer form;
- debt securities with respect to which payments of principal, premium or interest are determined with reference to an index or formula (including changes in prices of particular securities, currencies or commodities);

- debt securities with respect to which principal or interest is payable in a foreign or composite currency;
- debt securities that are issued at a discount below their stated principal amount, bearing no interest or interest at a rate that at the time of issuance is below market rates or original issue discount debt securities; and
- variable rate debt securities that are exchangeable for fixed rate debt securities.

Unless otherwise provided in the applicable prospectus supplement, securities in registered form may be transferred or exchanged at the office of the trustee at which its corporate trust business is principally administered in the United States, subject to the limitations provided in the indenture, without the payment of any service charge, other than any tax or governmental charge payable in connection therewith. Securities in bearer form will be transferable only by delivery. Provisions with respect to the exchange of securities in bearer form will be described in the prospectus supplement relating to those securities in bearer form.

All funds that we pay to a paying agent for the payment of principal, premium or interest with respect to any debt securities that remain unclaimed at the end of two years after that principal, premium or interest will have become due and payable will be repaid to us, and the holders of those debt securities or any related coupons will thereafter look only to us for payment thereof.

Global Securities

The debt securities of a series may be issued in whole or in part in the form of one or more global securities. A global security is a debt security that represents, and is denominated in an amount equal to the aggregate principal amount of, all outstanding debt securities of a series, or any portion thereof, in either case having the same terms, including the same original issue date, date or dates on which principal and interest are due, and interest rate or method of determining interest. A global security will be deposited with, or on behalf of, a depository, which will be identified in the prospectus supplement relating to such debt securities. Global securities may be issued in either registered or bearer form and in either temporary or definitive form. Unless and until it is exchanged in whole or in part for the individual debt securities represented thereby, a global security may not be transferred except as a whole by the depository to a nominee of the depository, by a nominee of the depository to the depository or another nominee of the depository, or by the depository or any nominee of the depository to a successor depository or any nominee of such successor.

The terms of the depository arrangement with respect to a series of debt securities will be described in the prospectus supplement relating to such debt securities. We anticipate that the following provisions will generally apply to depository arrangements, in all cases subject to any restrictions or limitations described in the prospectus supplement relating to such debt securities.

Upon the issuance of a global security, the depository for such global security will credit, on its book entry registration and transfer system, the respective principal amounts of the individual debt securities represented by such global security to the accounts of persons that have accounts with the depository. Such accounts will be designated by the dealers or underwriters with respect to such debt securities or, if such debt securities are offered and sold directly by us or through one or more agents, by us or such agents. Ownership of beneficial interests in a global security will be limited to participants or persons that hold beneficial interests through participants. Ownership of beneficial interests in such global security will be shown on, and the transfer of that ownership will be effected only through, records maintained by the depository (with respect to interests of participants) or records maintained by participants (with respect to interests of persons other than participants). The laws of some states require that certain purchasers of securities take physical delivery of such securities in definitive form. Such limitations and laws may impair the ability to transfer beneficial interests in a global security.

So long as the depository for a global security, or its nominee, is the registered owner or holder of such global security, such depository or nominee, as the case may be, will be considered the sole owner or holder of the individual debt securities represented by such global security for all purposes under the indenture. Except as provided below, owners of beneficial interests in a global security will not be entitled to have any of the individual debt securities represented by such global security registered in their names, will not receive or be entitled to receive physical delivery of any of such debt securities in definitive form and will not be considered the owners or holders thereof under the indenture.

Payments of principal, premium and interest with respect to individual debt securities represented by a global security will be made to the depository or its nominee, as the case may be, as the registered owner or holder of such global security. Neither we, the trustee, any paying agent or registrar for such debt securities nor any agent of ours or the trustee will have any responsibility or liability for:

- any aspect of the records relating to or payments made by the depository, its nominee or any participants on account of beneficial interests in the global security or for maintaining, supervising or reviewing any records relating to such beneficial interests;
- the payment to the owners of beneficial interests in the global security of amounts paid to the depository or its nominee; or
- any other matter relating to the actions and practices of the depository, its nominee or its participants.

Neither we, the trustee, any paying agent or registrar for such debt securities nor any agent of ours or the trustee will be liable for any delay by the depository, its nominee or any of its participants in identifying the owners of beneficial interests in the global security, and we and the trustee may conclusively rely on, and will be protected in relying on, instructions from the depository or its nominee for all purposes.

We expect that the depository for a series of debt securities or its nominee, upon receipt of any payment of principal, premium or interest with respect to a definitive global security representing any of such debt securities, will immediately credit participants' accounts with payments in amounts proportionate to their respective beneficial interests in the principal amount of such global security, as shown on the records of the depository or its nominee. We also expect that payments by participants to owners of beneficial interests in such global security held through such participants will be governed by standing instructions and customary practices, as is now the case with securities held for the accounts of customers and registered in "street name." Such payments will be the responsibility of such participants. See "— Limitations on Issuance of Securities in Bearer Form" below.

If the depository for a series of debt securities is at any time unwilling, unable or ineligible to continue as depository, we will appoint a successor depository. If a successor depository is not appointed by us within 90 days, we will issue individual debt securities of such series in exchange for the global security representing such series of debt securities. In addition, we may at any time and in our sole discretion determine to no longer have debt securities of a series represented by a global security and, in such event, will issue individual debt securities of such series in exchange for the global security representing such series of debt securities. Furthermore, if we so specify with respect to the debt securities of a series, an owner of a beneficial interest in a global security representing debt securities of such series may, on terms acceptable to us, the trustee and the depository for such global security, receive individual debt securities of such series in exchange for such beneficial interests. In any such instance, an owner of a beneficial interest in a global security will be entitled to physical delivery of individual debt securities of the series represented by such global security equal in principal amount to such beneficial interest and to have such debt securities registered in its name (if the debt securities are issuable as securities in registered form). Individual debt securities of such series so issued generally will be issued:

- as securities in registered form in minimum denominations, unless otherwise specified by us, of \$2,000 and any integral multiples of \$1,000 in excess thereof if the debt securities are issuable as securities in registered form;
- as securities in bearer form in the denomination or denominations specified by us if the debt securities are issuable as securities in bearer form; or
- as either securities in registered form or securities in bearer form as described above if the debt securities are issuable in either form.

Limitations on Issuance of Securities in Bearer Form

The debt securities of a series may be issued as securities in registered form (which will be registered as to principal and interest in the register maintained by the registrar for such debt securities) or securities in bearer form (which will be transferable only by delivery). If such debt securities are issuable as securities in bearer form, the applicable prospectus supplement will describe certain special limitations and considerations that will apply to such debt securities.

Certain Covenants

If debt securities are issued, the indenture, as supplemented for a particular series of debt securities, will contain certain covenants for the benefit of the holders of such series of debt securities, which will be applicable (unless waived or amended) so long as any of the debt securities of such series are outstanding, unless stated otherwise in the prospectus supplement. The specific terms of the covenants, and summaries thereof, will be set forth in the prospectus supplement relating to such series of debt securities.

Subordination

Debt securities of a series and any guarantees, may be subordinated, which we refer to as subordinated debt securities, to senior indebtedness (as defined in the applicable prospectus supplement) to the extent set forth in the prospectus supplement relating thereto. To the extent we conduct operations through subsidiaries, the holders of debt securities (whether or not subordinated debt securities) will be structurally subordinated to the creditors of our subsidiaries, except to the extent such subsidiary is a guarantor of such series of debt securities.

Events of Default

Each of the following will constitute an event of default under the form of indenture with respect to any series of debt securities:

- default in payment of the principal amount of the debt securities of that series, when such amount becomes due and payable at maturity, upon acceleration, required redemption or otherwise;
- failure to pay interest on the debt securities of that series within 30 days of the due date;
- failure to comply with the obligations described under “— Mergers and Sales of Assets” below;
- failure to comply for 90 days after notice with any of our other agreements in the debt securities of that series or the indenture or supplemental indenture related to that series of debt securities; or
- certain events of bankruptcy, insolvency or reorganization affecting us.

A prospectus supplement may omit, modify or add to the foregoing events of default.

An event of default under one series of debt securities does not necessarily constitute an event of default under any other series of debt securities. A default under the fourth bullet above will not constitute an event of default until the trustee notifies us or the holders of 30% in principal amount of the outstanding debt securities of such series notify us and the trustee of the default and we do not cure such default within the time specified after receipt of such notice.

If any event of default (other than an event of default relating to certain events of bankruptcy, insolvency or reorganization) occurs and is continuing with respect to a particular series of debt securities, either the trustee or the holders of not less than 30% in aggregate principal amount of the debt securities of that series then outstanding by written notice to us (and to the trustee if such notice is given by the holders), may declare the principal amount of (or in the case of original issue discount debt securities, the portion thereby specified in the terms thereof), and accrued interest on the debt securities of that series to be immediately due and payable. In the case of certain events of bankruptcy, insolvency or reorganization, the principal amount of, and accrued interest on the debt securities of that series will automatically become and be immediately due and payable without any declaration or other act on the part of the trustee or any holders. Upon a declaration by the trustee or the holders, we will be obligated to pay the principal amount plus accrued and unpaid interest of each affected series of debt securities so declared due and payable.

The holders of a majority in aggregate principal amount of the debt securities of any series then outstanding by notice to the trustee under the indenture may on behalf of the holders of all of such series of debt securities waive any existing default or event of default and its consequences under the applicable indenture except a continuing default or event of default in the payment of interest on, or the principal of, the debt securities of such series.

Subject to the provisions of the indenture relating to the duties of the trustee in case an event of default will occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under the indenture or debt securities at the request or direction of any of the holders of any series of debt securities, unless such holders have offered to the trustee indemnity or security satisfactory to the trustee against any cost, loss, liability or expense. Subject to such provisions for the indemnification of the trustee, the holders of at least a majority in aggregate principal amount of the outstanding debt securities of a series have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee with respect to such series of debt securities. The trustee, however, may refuse to follow any direction that conflicts with law or the indenture or that the trustee determines is unduly prejudicial to the rights of any other holder of such series of debt securities (it being understood that the trustee does not have an affirmative duty to ascertain whether or not any such direction unduly prejudices the rights of such holders) or that would involve the trustee in personal liability. Prior to taking any action under the indenture, the trustee will be entitled to indemnification satisfactory to it in its sole discretion against all costs, losses, liabilities and expenses caused by taking or not taking such action.

Except to enforce the right to receive payment of principal, premium, if any, or interest when due, no holder of debt securities of a series has any right to institute any proceeding with respect to the indenture or debt securities, or for the appointment of a receiver or a trustee, or for any other remedy thereunder, unless:

- such holder has previously given to the trustee written notice of a continuing event of default with respect to such series of debt securities;
- the holder or holders of at least 30% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holder or holders have offered security or indemnity satisfactory to the trustee against any loss, liability or expense, to the trustee to institute such proceeding as trustee; and
- the trustee has failed to institute such proceeding, and has not received from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series a direction inconsistent with such request, within 60 days after such notice, request and offer.

However, such limitations do not apply to a suit instituted by a holder of a debt security of such series for the enforcement of payment of the principal, premium, if any, or interest on such debt security on or after the applicable due date specified in such debt security.

The indenture will provide that if a default with respect to a series of debt securities occurs and is continuing and is actually known to a trust officer of the trustee, the trustee must send to each holder of such debt securities notice of the default within 90 days after it is actually known to a trust officer of the trustee. Except in the case of a default in the payment of the principal or premium, if any, upon acceleration, redemption or otherwise with respect to any debt security of a series when such amount becomes due and payable, the trustee may withhold notice if and so long as a committee of its trust officers in good faith determines that withholding notice is not opposed to the interests of the holders.

The indenture will require us to furnish to the trustee, within 120 days after the end of each fiscal year, a statement by certain of our officers as to whether or not we, to their knowledge, are in default in the performance or observance of any of the terms, provisions and conditions of the indenture and, if so, specifying all such known defaults. We will also be required to deliver to the trustee, within 30 days after the occurrence thereof, written notice of any event which would constitute a default; *provided, however*, that failure to provide such written notice will not in and of itself result in a default under the indenture.

Street name and other indirect holders should consult their banks and brokers for information on their requirements for giving notice or taking other actions upon a default.

Modification and Waiver

Subject to certain exceptions, modifications and amendments of the indenture, any supplemental indenture and any series of debt securities may be made by us and the trustee with the consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of any series affected by such modification or amendment.

No such modification or amendment may, without the consent of each holder affected thereby:

- reduce the percentage of principal amount of the outstanding debt securities, the consent of whose holders is required for any amendment;

- reduce the principal amount of, or interest on, or extend the Stated Maturity or interest payment periods of, any debt securities;
- change the provisions applicable to the redemption of any debt securities;
- make any debt securities payable in money or securities other than those stated in the debt securities;
- impair the contractual right of any holder of the debt securities to receive payment of principal of and interest on such holder's debt securities on or after the due dates therefor or to institute suit for the enforcement of any payment on or with respect to such holder's debt securities;
- except as otherwise provided as described under "— Satisfaction and Discharge" and "— Defeasance" herein, release any security or guarantee that may have been granted with respect to any debt securities;
- in the case of any subordinated securities, or coupons appertaining thereto, make any change in the provisions of the indenture relating to subordination that adversely affects the rights of any holder under such provisions (including any contractual subordination of senior unsubordinated debt securities); or
- make any change in the amendment provisions which require each holder's consent or in the waiver provisions

Without the consent of any holder, we and the trustee may amend the indenture for one or more of the following purposes:

- to cure any ambiguity, omission, defect or inconsistency;
- to surrender any right or power conferred upon the Company by the indenture, to add to the covenants of the Company such further covenants, restrictions, conditions or provisions for the protection of the holders of all or any series of debt securities as the board of directors of the Company will consider to be for the protection of the holders of such debt securities, and to make the occurrence, or the occurrence and continuance, of a default in respect of any such additional covenants, restrictions, conditions or provisions a default or an event of default under the indenture; *provided, however*, that with respect to any such additional covenant, restriction, condition or provision, such amendment may provide for a period of grace after default, which may be shorter or longer than that allowed in the case of other defaults, may provide for an immediate enforcement upon such default, may limit the remedies available to the trustee upon such default or may limit the right of holders of a majority in aggregate principal amount of the debt securities of any series to waive such default;
- to provide for the assumption by a successor company of the obligations of the Company under the indenture;
- to add guarantees with respect to the debt securities or to secure the debt securities;
- to make any change that does not adversely affect in any material respect the rights of any holder of the debt securities;
- to add to, change, or eliminate any of the provisions of the indenture with respect to one or more series of debt securities, so long as any such addition, change or elimination not otherwise permitted under the indenture will (a) neither apply to any debt securities of any series created prior to the execution of such supplemental indenture and entitled to the benefit of such provision nor modify the rights of the holders of any such debt securities with respect to the benefit of such provision or (b) become effective only when there is no such debt securities outstanding;
- to evidence and provide for the acceptance of appointment by a successor or separate trustee with respect to the debt securities of one or more series and to add to or change any of the provisions of the indenture as shall be necessary to provide for or facilitate the administration of the indenture by more than one trustee;
- to add or to change any of the provisions of the indenture to provide that debt securities in bearer form may be registrable as to principal, to change or eliminate any restrictions on the payment of principal or premium with respect to debt securities in registered form or of principal, premium or interest with respect to debt securities in bearer form, or to permit debt securities in registered form to be exchanged for debt securities in bearer form, so as to not adversely affect the interests of the holders of debt securities or any coupons of any series in any material respect or permit or facilitate the issuance of debt securities of any series in uncertificated form;

- in the case of subordinated debt securities, to make any change in the provisions of the indenture or any supplemental indenture relating to subordination that would limit or terminate the benefits available to any holder of senior Indebtedness under such provisions (but only if each such holder of senior Indebtedness consents to such change);
- to comply with any requirement of the SEC in connection with the qualification of the indenture or any supplemental indenture under the Trust Indenture Act;
- to conform any provision in the indenture or the debt securities to the description of any debt securities in an offering document;
- to approve a particular form of any proposed amendment;
- to provide for the issuance of additional debt securities of any series;
- to establish the form or terms of debt securities and coupons of any series pursuant to the indenture;
- to comply with the rules of any applicable depository;
- to make any amendment to the provisions of the indenture relating to the transfer and legending of debt securities; *provided, however*, that (a) compliance with the indenture as so amended would not result in debt securities being transferred in violation of the Securities Act or any other applicable securities law and (b) such amendment does not materially and adversely affect the rights of holders of debt securities to transfer debt securities; or
- to convey, transfer, assign, mortgage or pledge any property to or with the trustee, or to make such other provisions in regard to matters or questions arising under the indenture as shall not adversely affect, in any material respect, the interests of any holders of debt securities of any series.

Mergers and Sales of Assets

The indenture will provide that we will not consolidate with or merge with or into, or convey, transfer or lease in one transaction or a series of related transactions, directly or indirectly, all or substantially all of our properties and assets to, another person, unless (i) the resulting, surviving or transferee person, if not NRX Pharmaceuticals, Inc., is a person organized and existing under the laws of the United States of America, any state thereof or the District of Columbia; (ii) immediately after giving effect to such transaction, no default or event of default has occurred and is continuing under the indenture; (iii) the resulting, surviving or transferee person, if not NRX Pharmaceuticals, Inc., expressly assumes by supplemental indenture in a form satisfactory to the trustee all of our obligations under the debt securities and the indenture; and (iv) we or the successor person has delivered to the trustee the certificates and opinions of counsel required under the indenture. Upon any such consolidation, merger or transfer, the resulting, surviving or transferee person shall succeed to, and may exercise every right and power of, NRX Pharmaceuticals, Inc. under the indenture.

Satisfaction and Discharge of the Indenture; Defeasance

Unless otherwise provided for in the prospectus supplement, the indenture will generally cease to be of any further effect with respect to a series of debt securities if (a) we have delivered to the trustee for cancellation all debt securities of such series (with certain limited exceptions) or (b) all debt securities and coupons of such series not theretofore delivered to the trustee for cancellation will have become due and payable, or are by their terms to become due and payable within one year or are to be called for redemption within one year, and we will have irrevocably deposited with the trustee as trust funds the entire amount sufficient to pay at maturity or upon redemption all such debt securities and coupons (and if, in either case, we will also pay or cause to be paid all other sums payable under the indenture by us).

In addition, we will have a “legal defeasance option” (pursuant to which we may terminate, with respect to the debt securities of a particular series, all of our obligations under such debt securities and the indenture with respect to such debt securities) and a “covenant defeasance option” (pursuant to which we may terminate, with respect to the debt securities of a particular series, our obligations with respect to such debt securities under certain specified covenants contained in the indenture). If we exercise our legal defeasance option with respect to a series of debt securities, payment of such debt securities may not be accelerated because of an event of default. If we exercise our covenant defeasance option with respect to a series of debt securities, payment of such debt securities may not be accelerated because of an event of default related to the specified covenants.

The applicable prospectus supplement will describe the procedures we must follow in order to exercise our defeasance options.

Regarding the Trustee

The indenture will provide that, except during the continuance of an event of default, the trustee will perform only such duties as are specifically set forth in the indenture. During the existence of an event of default, the trustee may exercise such rights and powers vested in it under the indenture and use the same degree of care and skill in its exercise as a prudent person would exercise under the circumstances in the conduct of such person's own affairs.

The indenture and provisions of the Trust Indenture Act that are incorporated by reference therein will contain limitations on the rights of the trustee, should it become one of our creditors, to obtain payment of claims in certain cases or to realize on certain property received by it in respect of any such claim as security or otherwise. The trustee will be permitted to engage in other transactions with us or any of our affiliates; *provided, however*, that if it acquires any conflicting interest (as defined in the indenture or in the Trust Indenture Act), it must eliminate such conflict, apply to the SEC for permission to continue, or resign.

Governing Law

The indenture and the debt securities will be governed by, and construed in accordance with, the laws of the State of New York.

DESCRIPTION OF THE DEPOSITARY SHARES

General

We may, at our option, elect to offer fractional shares rather than full shares of the preferred stock of a series. In the event that we determine to do so, we will issue receipts for depositary shares, each of which will represent a fraction (to be set forth in the prospectus supplement relating to a particular series of preferred stock) of a share of a particular series of preferred stock as more fully described below.

The shares of any series of preferred stock represented by depositary shares will be deposited under one or more deposit agreements among us, a depositary to be named in the applicable prospectus supplement, and the holders from time to time of depositary receipts issued thereunder. Subject to the terms of the applicable deposit agreement, each holder of a depositary share will be entitled, in proportion to the applicable fraction of a share of preferred stock represented by the depositary share, to all the rights and preferences of the preferred stock represented thereby (including, as applicable, dividend, voting, redemption, subscription and liquidation rights).

The depositary shares will be evidenced by depositary receipts issued pursuant to the deposit agreement. Depositary receipts will be distributed to those persons purchasing the fractional shares of the related series of preferred stock.

The following description sets forth certain general terms and provisions of the depositary shares to which any prospectus supplement may relate. The particular terms of the depositary shares to which any prospectus supplement may relate and the extent, if any, to which such general provisions may apply to the depositary shares so offered will be described in the applicable prospectus supplement. To the extent that any particular terms of the depositary shares or the deposit agreement described in a prospectus supplement differ from any of the terms described below, then the terms described below will be deemed to have been superseded by that prospectus supplement relating to such deposited shares. The forms of deposit agreement and depositary receipt will be filed as exhibits to the documents incorporated or deemed to be incorporated by reference into this prospectus.

The following summary of certain provisions of the depositary shares and deposit agreement does not purport to be complete and is subject to, and is qualified in its entirety by express reference to, all the provisions of the deposit agreement and the applicable prospectus supplement, including the definitions.

Immediately following our issuance of shares of a series of preferred stock that will be offered as fractional shares, we will deposit the shares with the depositary, which will then issue and deliver the depositary receipts to the purchasers thereof. Depositary receipts will only be issued evidencing whole depositary shares. A depositary receipt may evidence any number of whole depositary shares.

Pending the preparation of definitive depositary receipts, the depositary may, upon our written order, issue temporary depositary receipts substantially identical to (and entitling the holders thereof to all the rights pertaining to) the definitive depositary receipts but not in definitive form. Definitive depositary receipts will be prepared thereafter without unreasonable delay, and such temporary depositary receipts will be exchangeable for definitive depositary receipts at our expense.

Dividends and Other Distributions

The depositary will distribute all cash dividends or other cash distributions received in respect of the related series of preferred stock to the record holders of depositary shares relating to the series of preferred stock in proportion to the number of the depositary shares owned by the holders.

In the event of a distribution other than in cash, the depositary will distribute property received by it to the record holders of depositary shares entitled thereto in proportion to the number of depositary shares owned by the holders, unless the depositary determines that the distribution cannot be made proportionately among the holders or that it is not feasible to make the distributions, in which case the depositary may, with our approval, adopt any method as it deems equitable and practicable for the purpose of effecting the distribution, including the sale (at public or private sale) of the securities or property thus received, or any part thereof, at the place or places and upon those terms as it may deem proper.

The amount distributed in any of the foregoing cases will be reduced by any amounts required to be withheld by us or the depositary on account of taxes or other governmental charges.

Redemption of Depositary Shares

If any series of the preferred stock underlying the depositary shares is subject to redemption, the depositary shares will be redeemed from the proceeds received by the depositary resulting from any redemption, in whole or in part, of the series of the preferred stock held by the depositary. The redemption price per depositary share will be equal to the applicable fraction of the redemption price per share payable with respect to the series of the preferred stock. If we redeem shares of a series of preferred stock held by the depositary, the depositary will redeem as of the same redemption date the number of depositary shares representing the shares of preferred stock so redeemed. If less than all the depositary shares are to be redeemed, the depositary shares to be redeemed will be selected by lot or substantially equivalent method determined by the depositary.

After the date fixed for redemption, the depositary shares so called for redemption will no longer be deemed to be outstanding and all rights of the holders of the depositary shares will cease, except the right to receive the monies payable upon redemption and any money or other property to which the holders of the depositary shares were entitled upon such redemption, upon surrender to the depositary of the depositary receipts evidencing the depositary shares. Any funds deposited by us with the depositary for any depositary shares that the holders thereof fail to redeem will be returned to us after a period of two years from the date the funds are so deposited.

Voting the Underlying Preferred Stock

Upon receipt of notice of any meeting at which the holders of any series of the preferred stock are entitled to vote, the depositary will mail the information contained in the notice of meeting to the record holders of the depositary shares relating to the series of preferred stock. Each record holder of the depositary shares on the record date (which will be the same date as the record date for the related series of preferred stock) will be entitled to instruct the depositary as to the exercise of the voting rights pertaining to the number of shares of the series of preferred stock represented by that holder's depositary shares. The depositary will endeavor, insofar as practicable, to vote or cause to be voted the number of shares of preferred stock represented by the depositary shares in accordance with the instructions, provided the depositary receives the instructions sufficiently in advance of the meeting to enable it to so vote or cause to be voted the shares of preferred stock, and we will agree to take all reasonable action that may be deemed necessary by the depositary in order to enable the depositary to do so. The depositary will abstain from voting shares of the preferred stock to the extent it does not receive specific instructions from the holders of depositary shares representing the preferred stock.

Withdrawal of Stock

Upon surrender of the depositary receipts at the corporate trust office of the depositary and upon payment of the taxes, charges and fees provided for in the deposit agreement and subject to the terms thereof, the holder of the depositary shares evidenced thereby will be entitled to delivery at such office, to or upon his or her order, of the number of whole shares of the related series of preferred stock and any money or other property, if any, represented by the depositary shares. Holders of depositary shares will be entitled to receive whole shares of the related series of preferred stock, but holders of the whole shares of preferred stock will not thereafter be entitled to deposit the shares of preferred stock with the depositary or to receive depositary shares therefor. If the depositary receipts delivered by the holder evidence a number of depositary shares in excess of the number of depositary shares representing the number of whole shares of the related series of preferred stock to be withdrawn, the depositary will deliver to the holder or upon his or her order at the same time a new depositary receipt evidencing the excess number of depositary shares.

Amendment and Termination of a Deposit Agreement

The form of depositary receipt evidencing the depositary shares of any series and any provision of the applicable deposit agreement may at any time and from time to time be amended by agreement between us and the depositary. However, any amendment that materially adversely alters the rights of the holders of depositary shares of any series will not be effective unless the amendment has been approved by the holders of at least a majority of the depositary shares of the series then outstanding. Every holder of a depositary receipt at the time the amendment becomes effective will be deemed, by continuing to hold the depositary receipt, to be bound by the deposit agreement as so amended. Notwithstanding the foregoing, in no event may any amendment impair the right of any holder of any depositary shares, upon surrender of the depositary receipts evidencing the depositary shares and subject to any conditions specified in the deposit agreement, to receive shares of the related series of preferred stock and any money or other property represented thereby, except in order to comply with mandatory provisions of applicable law. The deposit agreement may be terminated by us at any time upon not less than 60 days prior written notice to the depositary, in which case, on a date that is not later than 30 days after the date of the notice, the depositary shall deliver or make available for delivery to holders of depositary shares, upon surrender of the depositary receipts evidencing the depositary shares, the number of whole or fractional shares of the related series of preferred stock as are represented by the depositary shares. The deposit agreement shall automatically terminate after all outstanding depositary shares have been redeemed or there has been a final distribution in respect of the related series of preferred stock in connection with any liquidation, dissolution or winding up of us and the distribution has been distributed to the holders of depositary shares.

Charges of Depositary

We will pay all transfer and other taxes and the governmental charges arising solely from the existence of the depositary arrangements. We will pay the charges of the depositary, including charges in connection with the initial deposit of the related series of preferred stock and the initial issuance of the depositary shares and all withdrawals of shares of the related series of preferred stock, except that holders of depositary shares will pay transfer and other taxes and governmental charges and any other charges as are expressly provided in the deposit agreement to be for their accounts.

Resignation and Removal of Depositary

The depositary may resign at any time by delivering to us written notice of its election to do so, and we may at any time remove the depositary. Any resignation or removal will take effect upon the appointment of a successor depositary, which successor depositary must be appointed within 60 days after delivery of the notice of resignation or removal and must be a bank or trust company having its principal office in the United States and having a combined capital and surplus of at least \$50,000,000.

Miscellaneous

The depositary will forward to the holders of depositary shares all reports and communications from us that are delivered to the depositary and which we are required to furnish to the holders of the related preferred stock.

The depositary's corporate trust office will be identified in the applicable prospectus supplement. Unless otherwise set forth in the applicable prospectus supplement, the depositary will act as transfer agent and registrar for depositary receipts and if shares of a series of preferred stock are redeemable, the depositary will also act as redemption agent for the corresponding depositary receipts.

DESCRIPTION OF THE WARRANTS

The following description of the terms of the warrants sets forth certain general terms and provisions of the warrants to which any prospectus supplement may relate. We may issue warrants for the purchase of common stock, preferred stock, debt securities or depositary shares. Warrants may be issued independently or together with common stock, preferred stock, debt securities or depositary shares offered by any prospectus supplement and may be attached to or separate from any such offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. The following summary of certain provisions of the warrants does not purport to be complete and is subject to, and qualified in its entirety by reference to, the provisions of the warrant agreement that will be filed with the SEC in connection with the offering of such warrants.

Debt Warrants

The prospectus supplement relating to a particular issue of debt warrants will describe the terms of such debt warrants, including the following:

- the title of such debt warrants;
- the offering price for such debt warrants, if any;
- the aggregate number of such debt warrants;
- the designation and terms of the debt securities purchasable upon exercise of such debt warrants;
- if applicable, the designation and terms of the debt securities with which such debt warrants are issued and the number of such debt warrants issued with each such debt security;
- if applicable, the date from and after which such debt warrants and any debt securities issued therewith will be separately transferable;
- the principal amount of debt securities purchasable upon exercise of a debt warrant and the price at which such principal amount of debt securities may be purchased upon exercise (which price may be payable in cash, securities or other property);
- the date on which the right to exercise such debt warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such debt warrants that may be exercised at any one time;
- whether the debt warrants represented by the debt warrant certificates or debt securities that may be issued upon exercise of the debt warrants will be issued in registered or bearer form;
- information with respect to book-entry procedures, if any;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material United States federal income tax considerations;
- the antidilution or adjustment provisions of such debt warrants, if any;
- the redemption or call provisions, if any, applicable to such debt warrants; and
- any additional terms of such debt warrants, including terms, procedures, and limitations relating to the exchange and exercise of such debt warrants.

Stock Warrants

The prospectus supplement relating to any particular issue of common stock warrants, preferred stock warrants or depositary share warrants will describe the terms of such warrants, including the following:

- the title of such warrants;
- the offering price for such warrants, if any;
- the aggregate number of such warrants;
- the designation and terms of the offered securities purchasable upon exercise of such warrants;
- if applicable, the designation and terms of the offered securities with which such warrants are issued and the number of such warrants issued with each such offered security;
- if applicable, the date from and after which such warrants and any offered securities issued therewith will be separately transferable;
- the number of shares of common stock, preferred stock or depositary shares purchasable upon exercise of a warrant and the price at which such shares may be purchased upon exercise;
- the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;
- if applicable, the minimum or maximum amount of such warrants that may be exercised at any one time;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material United States federal income tax considerations;
- the antidilution provisions of such warrants, if any;
- the redemption or call provisions, if any, applicable to such warrants; and
- any additional terms of such warrants, including terms, procedures and limitations relating to the exchange and exercise of such warrants.

DESCRIPTION OF THE RIGHTS

We may issue rights to purchase our common stock. The rights may or may not be transferable by the persons purchasing or receiving the rights. In connection with any rights offering, we may enter into a standby underwriting or other arrangement with one or more underwriters or other persons pursuant to which such underwriters or other persons would purchase any offered securities remaining unsubscribed for after such rights offering. Each series of rights will be issued under a separate rights agent agreement to be entered into between us and one or more banks, trust companies or other financial institutions, as rights agent, that we will name in the applicable prospectus supplement. The rights agent will act solely as our agent in connection with the rights and will not assume any obligation or relationship of agency or trust for or with any holders of rights certificates or beneficial owners of rights.

The prospectus supplement relating to any rights that we offer will include specific terms relating to the offering, including, among other matters:

- the date of determining the security holders entitled to the rights distribution;
- the aggregate number of rights issued and the aggregate number of shares of common stock purchasable upon exercise of the rights;

- the exercise price;
- the conditions to completion of the rights offering;
- the date on which the right to exercise the rights will commence and the date on which the rights will expire; and
- any applicable federal income tax considerations.

Each right would entitle the holder of the rights to purchase for cash the principal amount of shares of common stock at the exercise price set forth in the applicable prospectus supplement. Rights may be exercised at any time up to the close of business on the expiration date for the rights provided in the applicable prospectus supplement. After the close of business on the expiration date, all unexercised rights will become void.

If less than all of the rights issued in any rights offering are exercised, we may offer any unsubscribed securities directly to persons other than our security holders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby arrangements, as described in the applicable prospectus supplement.

DESCRIPTION OF THE PURCHASE CONTRACTS

We may issue, from time to time, purchase contracts, including contracts obligating holders to purchase from us and us to sell to the holders, a specified principal amount of debt securities, shares of common stock or preferred stock, depositary shares, government securities, or other securities that we may sell under this prospectus at a future date or dates. The consideration payable upon settlement of the purchase contracts may be fixed at the time the purchase contracts are issued or may be determined by a specific reference to a formula set forth in the purchase contracts. The purchase contracts may be issued separately or as part of units consisting of a purchase contract and other securities or obligations issued by us or third parties, including United States treasury securities, securing the holders' obligations to purchase the relevant securities under the purchase contracts. The purchase contracts may require us to make periodic payments to the holders of the purchase contracts or units or vice versa, and the payments may be unsecured or prefunded on some basis. The purchase contracts may require holders to secure their obligations under the purchase contracts.

The prospectus supplement related to any particular purchase contracts will describe, among other things, the material terms of the purchase contracts and of the securities being sold pursuant to such purchase contracts, a discussion, if appropriate, of any special United States federal income tax considerations applicable to the purchase contracts and any material provisions governing the purchase contracts that differ from those described above. The description in the prospectus supplement will not necessarily be complete and will be qualified in its entirety by reference to the purchase contracts, and, if applicable, collateral arrangements and depositary arrangements, relating to the purchase contracts.

DESCRIPTION OF THE UNITS

We may, from time to time, issue units comprised of one or more of certain other securities that may be offered under this prospectus, in any combination. Each unit may also include debt obligations of third parties, such as U.S. Treasury securities. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately at any time, or at any time before a specified date.

Any prospectus supplement related to any particular units will describe, among other things:

- the material terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
- any material provisions relating to the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units;
- if appropriate, any special United States federal income tax considerations applicable to the units; and
- any material provisions of the governing unit agreement that differ from those described above.

DESCRIPTION OF CERTAIN PROVISIONS OF DELAWARE LAW AND OUR CERTIFICATE OF INCORPORATION AND BYLAWS

Certain provisions of Delaware law, our Charter and Bylaws discussed below may have the effect of making more difficult or discouraging a tender offer, proxy contest or other takeover attempt. These provisions are expected to encourage persons seeking to acquire control of our company to first negotiate with our Board of Directors. We believe that the benefits of increasing our ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure our company outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Delaware Anti-Takeover Law.

We are subject to Section 203 of the DGCL. Section 203 generally prohibits a public Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding specified shares; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66⅔% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a “business combination” to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, exchange, mortgage, pledge, transfer or other disposition of 10% or more of the assets of the corporation to or with the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an “interested stockholder” as any person that is:

- the owner of 15% or more of the outstanding voting stock of the corporation;
- an affiliate or associate of the corporation who was the owner of 15% or more of the outstanding voting stock of the corporation at any time within three years immediately prior to the relevant date; or
- the affiliates and associates of the above.

Under specific circumstances, Section 203 makes it more difficult for an “interested stockholder” to effect various business combinations with a corporation for a three-year period, although the stockholders may, by adopting an amendment to the corporation’s certificate of incorporation or bylaws, elect not to be governed by this section, effective 12 months after adoption.

Our Charter and Bylaws do not exclude us from the restrictions of Section 203. We anticipate that the provisions of Section 203 might encourage companies interested in acquiring us to negotiate in advance with our Board since the stockholder approval requirement would be avoided if a majority of the directors then in office approve either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder.

Charter and Bylaws.

Provisions of our Charter and Bylaws may delay or discourage transactions involving an actual or potential change of control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock.

PLAN OF DISTRIBUTION

We may offer and sell the securities in any one or more of the following ways:

- to or through underwriters, brokers or dealers;
- directly to one or more other purchasers;
- through a block trade in which the broker or dealer engaged to handle the block trade will attempt to sell the securities as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- through agents on a best-efforts basis;
- any method that is deemed an “at the market offering” as defined in Rule 415(a)(4) under the Securities Act; or
- otherwise through a combination of any of the above methods of sale.

In addition, we may enter into option, share lending or other types of transactions that require us to deliver shares of common stock to an underwriter, broker or dealer, who will then resell or transfer the shares of common stock under this prospectus. We may also enter into hedging transactions with respect to our securities. For example, we may:

- enter into transactions involving short sales of the shares of common stock by underwriters, brokers or dealers;
- sell shares of Common Stock short and deliver the shares to close out short positions;
- enter into option or other types of transactions that require us to deliver shares of Common Stock to an underwriter, broker or dealer, who will then resell or transfer the shares of Common Stock under this prospectus; or
- loan or pledge the shares of Common Stock to an underwriter, broker or dealer, who may sell the loaned shares or, in the event of default, sell the pledged shares.

We may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be identified in the applicable prospectus supplement (or a post-effective amendment). In addition, we may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

Each time we sell securities, we will provide a prospectus supplement that will name any underwriter, dealer or agent involved in the offer and sale of the securities. The prospectus supplement will also set forth the terms of the offering, including:

- the purchase price of the securities and the proceeds we will receive from the sale of the securities;
- any underwriting discounts and other items constituting underwriters’ compensation;
- any public offering or purchase price and any discounts or commissions allowed or re-allowed or paid to dealers;
- any commissions allowed or paid to agents;
- any other offering expenses;
- any securities exchanges on which the securities may be listed;
- the method of distribution of the securities;

- the terms of any agreement, arrangement or understanding entered into with the underwriters, brokers or dealers; and
- any other information we think is important.

If underwriters or dealers are used in the sale, the securities will be acquired by the underwriters or dealers for their own account. The securities may be sold from time to time by us in one or more transactions:

- at a fixed price or prices that may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices;
- at varying prices determined at the time of sale; or
- at negotiated prices.

Such sales may be effected:

- in transactions on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in transactions in the over-the-counter market;
- in block transactions in which the broker or dealer so engaged will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction, or in crosses, in which the same broker acts as an agent on both sides of the trade;
- through the writing of options; or
- through other types of transactions.

The securities may be offered to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more of such firms. Unless otherwise set forth in the prospectus supplement, the obligations of underwriters or dealers to purchase the securities offered will be subject to certain conditions precedent and the underwriters or dealers will be obligated to purchase all the offered securities if any are purchased. Any public offering price and any discount or concession allowed or reallocated or paid by underwriters or dealers to other dealers may be changed from time to time.

Any shares of Common Stock covered by this prospectus that qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than pursuant to this prospectus. Any shares of Common Stock offered under this prospectus will be listed on The Nasdaq Global Market (or other such exchange or automated quotation system on which the Common Stock is listed), subject to official notice of issuance.

The securities may be sold directly by us or through agents designated by us from time to time. Any agent involved in the offer or sale of the securities in respect of which this prospectus is delivered will be named, and any commissions payable by us to such agent will be set forth in, the prospectus supplement. Unless otherwise indicated in the prospectus supplement, any such agent will be acting on a best efforts basis for the period of its appointment.

Offers to purchase the securities offered by this prospectus may be solicited, and sales of the securities may be made by us directly to institutional investors or others, who may be deemed to be underwriters within the meaning of the Securities Act with respect to any resale of the securities. The terms of any offer made in this manner will be included in the prospectus supplement relating to the offer.

If indicated in the applicable prospectus supplement, underwriters, dealers or agents will be authorized to solicit offers by certain institutional investors to purchase securities from us pursuant to contracts providing for payment and delivery at a future date. Institutional investors with which these contracts may be made include, among others:

- commercial and savings banks;
- insurance companies;
- pension funds;
- investment companies; and
- educational charitable institutions.

In all cases, these purchasers must be approved by us. Unless otherwise set forth in the applicable prospectus supplement, the obligations of any purchaser under any of these contracts will not be subject to any conditions except that (a) the purchase of the securities must not at the time of delivery be prohibited under the laws of any jurisdiction to which that purchaser is subject, and (b) if the securities are also being sold to underwriters, we must have sold to these underwriters the securities not subject to delayed delivery. Underwriters and other agents will not have any responsibility in respect of the validity or performance of these contracts.

Some of the underwriters, dealers or agents used by us in any offering of securities under this prospectus may be customers of, engage in transactions with, and perform services for us or affiliates of ours in the ordinary course of business. Underwriters, dealers, agents and other persons may be entitled under agreements which may be entered into with us to indemnification against and contribution toward certain civil liabilities, including liabilities under the Securities Act, and to be reimbursed by us for certain expenses.

Subject to any restrictions relating to debt securities in bearer form, any securities initially sold outside the United States may be resold in the United States through underwriters, dealers or otherwise.

Any underwriters to which offered securities are sold by us for public offering and sale may make a market in such securities, but those underwriters will not be obligated to do so and may discontinue any market making at any time.

The anticipated date of delivery of the securities offered by this prospectus will be described in the applicable prospectus supplement relating to the offering.

To comply with the securities laws of some states, if applicable, the securities may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the securities may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, certain legal matters in connection with this offering will be passed upon for us by Cozen O'Connor, New York, New York. If legal matters in connection with offerings made pursuant to this prospectus are passed upon by counsel for underwriters, dealers or agents, if any, such counsel will be named in the prospectus supplement relating to such offering.

EXPERTS

The consolidated financial statements of NRx Pharmaceuticals, Inc. as of December 31, 2024 and 2023, and for the years then ended, incorporated in this prospectus by reference from the Company's Annual Report on Form 10-K, for the year ended December 31, 2024, have been audited by Salberg & Company, P.A., an independent registered public accounting firm, as stated in their report thereon (which report contains an explanatory paragraph regarding the ability of the Company to continue as a going concern), and have been incorporated in this prospectus and registration statement in reliance upon such report and upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly, and current reports, proxy statements, and other information with the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information in the registration statement. For further information about us and the securities offered by this prospectus, we refer you to the registration statement and the exhibits filed as part of the registration statement. You may read the registration statement as well as our reports, proxy statements and other documents we file with the SEC over the internet at the SEC's website at <https://www.sec.gov>.

We also maintain a website at www.nrxpharma.com, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with the SEC into this prospectus, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information that we file later with the SEC will automatically update and supersede information in this prospectus. In all cases, you should rely on the later information over different information included in this prospectus. Except to the extent that information is deemed furnished and not filed pursuant to securities laws and regulations, the following documents have been filed by us with the SEC and are incorporated by reference into this prospectus:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, filed with the SEC on [March 14, 2025](#), as amended on [April 29, 2025](#);
- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2025, June 30, 2025 and September 30, 2025 filed with the SEC on [May 15, 2025](#), [August 18, 2025](#), and [November 14, 2025](#);
- Our Current Report on Form 8-K and 8-K/A filed with the SEC on [January 10, 2025](#); [January 14, 2025](#); [January 22, 2025](#); [January 29, 2025](#); [February 3, 2025](#); [April 17, 2025](#); [May 13, 2025](#); [June 9, 2025](#); [August 15, 2025](#); [August 18, 2025](#); [September 8, 2025](#); [September 12, 2025](#); [September 26, 2025](#); [October 23, 2025](#); [November 21, 2025](#); and [November 26, 2025](#); and
- The description of our common stock contained in or incorporated into our [Registration Statement on Form 8-A, filed with the SEC on November 20, 2017](#), and any amendment or report updating that description.

We also incorporate by reference all documents we file pursuant to Section 13(a), 13(c), 14 or 15 of the Exchange Act (other than any portions of filings that are furnished rather than filed pursuant to Items 2.02 and 7.01 of a Current Report on Form 8-K) after the date of the registration statement of which this prospectus is a part and prior to effectiveness of such registration statement. All documents we file in the future pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and prior to the termination of the offering are also incorporated herein by reference and are an important part of this prospectus.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document which also is or deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

We will provide upon request to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the information that has been incorporated by reference in the prospectus but not delivered with the prospectus. You may request a copy of these filings, excluding the exhibits to such filings which we have not specifically incorporated by reference in such filings, at no cost, by writing to or calling us at:

NRx Pharmaceuticals, Inc.
Michael Abrams
Chief Financial Officer
1201 North Market Street, Suite 111
Wilmington, Delaware 19801
(484) 254-6134



Shares of Common Stock

PROSPECTUS SUPPLEMENT

Lead Bookrunning Manager

BTIG

Joint Bookrunning Manager

Lucid Capital Markets

June , 2026