

As filed with the Securities and Exchange Commission on June 8, 2022

Registration No. 333-264201

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

**Post-Effective Amendment No. 1
on Form S-3 to Form S-1**

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

NRX Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or jurisdiction of
incorporation or organization)

2836
(Primary Standard Industrial
Classification Code Number)

82-2844431
(IRS Employer
Identification No.)

**1201 Orange Street, Suite 600
Wilmington, DE 19801
(484) 254-6134**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Alessandra Daigneault
Chief Corporate Officer, General Counsel & Secretary
1201 Orange Street, Suite 600
Wilmington, Delaware 19801
(484) 254-6134**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**David S. Huntington, Esq.
David A. Curtiss, Esq.
Paul, Weiss, Rifkind, Wharton & Garrison LLP
1285 Avenue of the Americas
New York, NY 10019
Tel: (212) 373-3000**

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

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

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

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

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

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

Pursuant to Rule 429 under the Securities Act, the prospectus contained in this registration statement on Form S-3 (the “Registration Statement”) will be used as a combined prospectus in connection with this Registration Statement and (i) the Registration Statement on Form S-1 (File No. 333-259336) that was declared effective by the SEC on September 15, 2021, (ii) the Registration Statement on Form S-1 (File No. 333-257438) that was declared effective by the SEC on July 9, 2021 and (iii) the Registration Statement on Form S-1 (File No. 333-264201) that was declared effective by the SEC on April 19, 2022. Accordingly, this Registration Statement also constitutes post-effective amendments to the registration statements identified in (i) through (iii) and such post-effective amendments will become effective concurrently with the effectiveness of this Registration Statement in accordance with Section 8(c) of the Securities Act.

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

EXPLANATORY NOTE

Pursuant to Rule 429 under the Securities Act, the prospectus included in this Registration Statement is a combined prospectus relating to:

- The resale 7,824,727 shares of Common Stock by certain selling securityholders pursuant to the terms and conditions of the Securities Purchase Agreement, dated as of January 30, 2022, all of which were registered for resale on the registrant’s registration statement on Form S-1 (File No. 333-264201) that was declared effective by the SEC on April 19, 2022.
- The issuance of up to 8,215,963 shares of Common Stock issuable upon the exercise of preferred investment options and placement agent preferred investment options issued by the registrant on February 2, 2022 in a private placement, all of which were registered for resale on the registrant’s registration statement on Form S-1 (File No. 333-264201) that was declared effective by the SEC on April 19, 2022.

- The resale of up to (i) 2,727,273 shares of Common Stock by certain selling securityholders pursuant to the terms and conditions of the Registration Rights Agreement, dated as of August 19, 2021, (ii) 8,545 shares of Common Stock by certain service providers, and (iii) 200,000 shares held by certain members of the registrant's board of directors, all of which were registered for resale on the registrant's registration statement on Form S-1 (File No. 333-259336) that was declared effective by the SEC on September 15, 2021.
 - The primary issuance of up to 2,863,637 shares of Common Stock issuable upon the exercise of preferred investment options and placement agent preferred investment options issued by the registrant on August 23, 2021 in a private placement, all of which were registered for resale on the registrant's registration statement on Form S-1 (File No. 333-259336) that was declared effective by the SEC on September 15, 2021.
 - The resale of up to 8,757,258 shares of Common Stock by certain selling securityholders issued in connection with the consummation of the registrant's business combination on May 24, 2021, all of which were registered for resale on the registrant's registration statement on Form S-1, as amended (File No. 333-257438) that was declared effective by the SEC on July 9, 2021.
 - The primary issuance of up to 3,586,250 shares of Common Stock issuable upon the exercise of warrants issued by the registrant on the registrant's registration statement on Form S-1, as amended (File No. 333-257438) that was declared effective by the SEC on July 9, 2021.
 - The resale of up to 11,102,676 shares of Common Stock held by Glytech, LLC, all of which are being registered for sale and beneficially owned by Daniel Javitt.
 - The resale of up to (i) 11,299,997 shares of Common Stock held by the Jonathan Javitt Living Trust, (ii) 1,422,000 shares of Common Stock held by The Javitt 2012 Irrevocable Dynasty Trust, and (iii) 46,332 shares of Common Stock held by Jonathan Javitt, all of which are being registered for sale and beneficially owned by Jonathan Javitt.
 - The resale of up to (i) 11,000 shares of Common Stock held by Wills Eye Hospital, (ii) 20,000 shares of Common Stock held by Princeton First Aid and Rescue Squad, and (iii) 18,000 shares of Common Stock held by North American Friends of Moed, Inc., all of which are being registered for sale.
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Subject to Completion, dated June 8, 2022

PROSPECTUS



NRX Pharmaceuticals, Inc.
58,103,658 Shares of Common Stock

This prospectus relates to the primary issuance by NRX Pharmaceuticals, Inc. (“we,” “us,” “our,” “NRX” or the “Company”) of up to 14,665,850 shares of common stock, par value \$0.001 per share (the “Common Stock”) and the resale of up to 43,437,808 shares of Common Stock held by certain selling securityholders and selling service providers, as follows:

- The resale 7,824,727 shares of Common Stock by certain selling securityholders pursuant to the terms and conditions of the Securities Purchase Agreement, dated as of January 30, 2022, all of which were registered for resale on the registrant’s registration statement on Form S-1 (File No. 333-264201) that was declared effective by the SEC on April 19, 2022.
- The primary issuance of up to 8,215,963 shares of Common Stock issuable upon the exercise of preferred investment options (the “February 2022 preferred investment options”) and placement agent preferred investment options (the “February 2022 placement agent options”) and together with the February 2022 preferred investment options, the “February 2022 investment options”) issued by the registrant on February 2, 2022 in a private placement, all of which were registered for resale on the registrant’s registration statement on Form S-1 (File No. 333-264201) that was declared effective by the SEC on April 19, 2022.
- The resale of up to (i) 2,727,273 shares of Common Stock by certain selling securityholders pursuant to the terms and conditions of the Registration Rights Agreement, dated as of August 19, 2021, (ii) 8,545 shares of Common Stock by certain service providers, and (iii) 200,000 shares held by certain members of the registrant’s board of directors, all of which were registered for resale on the registrant’s registration statement on Form S-1 (File No. 333-259336) that was declared effective by the SEC on September 15, 2021.
- The primary issuance of up to 2,863,637 shares of Common Stock upon the exercise of preferred investment options and placement agent preferred investment options (collectively, the “August 2021 investment options”) and together with the February 2022 investment options, the “investment options”) issued by the registrant on August 23, 2021 in a private placement, all of which were registered for resale on the registrant’s registration statement on Form S-1 (File No. 333-259336) that was declared effective by the SEC on September 15, 2021.
- The resale of up to 8,757,258 shares of Common Stock by certain selling securityholders issued in connection with the consummation of the registrant’s business combination on May 24, 2021, all of which were registered for resale on the registrant’s registration statement on Form S-1, as amended (File No. 333-257438) that was declared effective by the SEC on July 9, 2021.
- The primary issuance of up to 3,586,250 shares of Common Stock issuable upon the exercise of warrants issued by the registrant on the registrant’s registration statement on Form S-1, as amended (File No. 333-257438) that was declared effective by the SEC on July 9, 2021.
- The resale of up to 11,102,676 shares of Common Stock held by Glytech, LLC, all of which are being registered for sale and beneficially owned by Daniel Javitt.
- The resale of up to (i) 11,299,997 shares of Common Stock held by the Jonathan Javitt Living Trust, (ii) 1,422,000 shares of Common Stock held by the Javitt 2012 Irrevocable Dynasty Trust, and (iii) 46,332 shares of Common Stock held by Jonathan Javitt, all of which are being registered for sale and beneficially owned by Jonathan Javitt.
- The resale of up to (i) 11,000 shares of Common Stock held by Wills Eye Hospital, (ii) 20,000 shares of Common Stock held by Princeton First Aid and Rescue Squad, and (iii) 18,000 shares of Common Stock held by North American Friends of Moed, Inc., all of which are being registered for sale.

This registration does not mean that the selling securityholders or selling service providers named herein will actually offer or sell any of these shares. We will not receive any proceeds from the resale of any of the shares of Common Stock being registered hereby sold by the selling securityholders or selling service providers. However, we may receive proceeds from the exercise of investment options and warrants held by the selling securityholders exercised other than pursuant to any applicable cashless exercise provisions.

The number of shares available for re-sale under this prospectus on the date hereof may have changed since the SEC declared this Registration Statement effective. See “Selling Securityholders” and “Selling Service Providers” beginning on pages 17 and 24, respectively, for an updated list of the shares still available for sale under this prospectus to the extent that we are aware of any such changes.

Our Common Stock is listed on the Nasdaq Global Market (“Nasdaq”) under the symbol “NRXP” and our warrants are listed on Nasdaq under the symbol “NRXPW”. On June 7, 2022, the closing sale price of our Common Stock as reported on Nasdaq was \$0.65, and the closing sale price of our warrants as reported on Nasdaq was \$0.20.

Following the effectiveness of the Registration Statement of which this prospectus forms a part, the sale and distribution of securities offered hereby may be effected from time to time in one or more transactions that may take place on Nasdaq (or such other market or quotation system on which our common stock is then listed or quoted), including ordinary brokers’ transactions, privately negotiated transactions or through sales to one or more dealers for resale of such securities as principals, at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices. Usual and customary or specifically negotiated brokerage fees or commissions may be paid by the selling securityholders or selling service providers. The selling securityholders, selling service providers and intermediaries through whom such securities are sold may be deemed “underwriters” within the meaning of the Securities Act of 1933, as amended (the “Securities Act”), with respect to the securities offered hereby, and any profits realized or commissions received may be deemed underwriting compensation.

This prospectus describes the general manner in which shares of Common Stock may be offered and sold by any selling securityholders or selling service providers. When the selling securityholders or selling service providers sell shares of Common Stock under this prospectus, we may, if necessary and required by law, provide a prospectus supplement that will contain specific information about the terms of that offering. Any prospectus supplement may also add to, update, modify or replace information contained in this prospectus. We urge you to read carefully this prospectus, any accompanying prospectus supplement and any documents we incorporate by reference into this prospectus and any accompanying prospectus supplement before you make your investment decision.

We are an “emerging growth company” as that term is defined in the Jumpstart Our Business Startups Act of 2012 and, as such, have elected to take advantage of certain reduced public company reporting requirements for this prospectus and future filings.

Investing in our Common Stock is highly speculative and involves a significant degree of risk. See “Risk Factors” beginning on page 9 of this prospectus for a discussion of information that should be considered before making a decision to purchase our Common Stock.

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

The date of this prospectus is June 8, 2022.

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

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ABOUT THIS PROSPECTUS

We are filing a single prospectus in this Registration Statement pursuant to Rule 429 under the Securities Act. Pursuant to Rule 429, this Registration Statement constitutes a post-effective amendment to each of the registrant's registration statement on Form S-1 (File No. 333-264201) that was declared effective by the SEC on April 19, 2022 (the "April 2022 Registration Statement"), registration statement on Form S-1 (File No. 333-259336) that was declared effective by the SEC on September 15, 2021 (the "September 2021 Registration Statement") and registration statement on Form S-1, as amended (File No. 333-257438) that was declared effective by the SEC on July 9, 2021 (the "July 2021 Registration Statement"), with respect to the offering of such unsold shares thereunder. We are filing this post-effective amendment to the April 2022 Registration Statement, the September 2021 Registration Statement and the July 2021 Registration Statement on Form S-3 for the purpose of converting such registration statements into a single Registration Statement on Form S-3. We will not receive any proceeds from the sale of Common Stock by the selling securityholders or the selling service providers. We will receive the proceeds from any exercise of investment options and warrants for cash.

We may also file a prospectus supplement or an additional post-effective amendment to the Registration Statement of which this prospectus forms a part that may contain material information relating to these offerings. The prospectus supplement or post-effective amendment may also add, update or change information contained in this prospectus with respect to that offering. If there is any inconsistency between the information in the original prospectus and the applicable prospectus supplement or post-effective amendment, you should rely on the prospectus supplement or post-effective amendment, as applicable. Before purchasing any securities, you should carefully read the original prospectus, any post-effective amendment, and any applicable prospectus supplement, together with the additional information described in the "*Where You Can Find More Information*" section of this prospectus.

Neither we, the selling securityholders, nor the selling service providers, have authorized anyone to provide you with any information or to make any representations other than those contained in the original prospectus, any post-effective amendment, or any applicable prospectus supplement prepared by or on behalf of us or to which we have referred you. We, the selling securityholders and the selling service providers take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We, the selling securityholders and the selling service providers will not make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in the original prospectus, any post-effective amendment and any applicable prospectus supplement to the original prospectus is accurate only as of the date on its respective cover. Our business, financial condition, results of operations and prospects may have changed since those dates. The original prospectus contained, this and any other post-effective amendment or any prospectus supplement may contain, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included in the original prospectus, this or any other post-effective amendment or any prospectus supplement may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed in the "*Risk Factors*" section of this prospectus, this and any other post-effective amendment and the applicable prospectus supplement. Accordingly, investors should not place undue reliance on this information.

We own or have rights to trademarks, trade names and service marks, including ZYESAMI[®], and NRX-101[™], that we use in connection with the operation of our business. In addition, our name, logos, website name and address are our trademarks or service marks. Solely for convenience, in some cases, the trademarks, trade names and service marks referred to in this prospectus are listed without the applicable [®], [™] and SM symbols, but we will assert, to the fullest extent under applicable law, our rights to these trademarks, trade names and service marks. Other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This document 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 the global outbreak of the novel coronavirus disease (“COVID-19”); the impact of pharmaceutical industry regulation and health care legislation in the United States and internationally; global trends toward health care cost containment; 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.

PROSPECTUS SUMMARY

This summary highlights, and is qualified in its entirety by, the more detailed information and financial statements included elsewhere in this prospectus. This summary does not contain all of the information that may be important to you in making your investment decision. You should read this entire prospectus carefully, especially the “Risk Factors” section beginning on page 9 of this prospectus and our consolidated financial statements and the related notes which are incorporated by reference into this prospectus, before deciding to invest in our Common Stock.

Overview

NRx is a clinical-stage pharmaceutical company which develops, through its wholly-owned operating subsidiaries, NeuroRx, Inc., (“NeuroRx”) a Delaware corporation, and NeuroRx 2015 LTD, an Israeli limited liability company, novel therapeutics for the treatment of central nervous system disorders and life-threatening pulmonary diseases. Our strategy is to apply innovative science to known molecules in the pursuit of therapies for high unmet needs, including lethal conditions. Given the recent geopolitical changes and other developments, our company recently re-prioritized its development activities and geographic focus. We are currently developing the following pharmaceutical products across our psychiatry and pulmonary areas:

- NRX-100 and NRX-101. NRX-100 and NRX-101 are NMDA-targeted medicines designed to address both depression and suicidal ideation. NRX-101 is a patented, fixed dose combination of D-cycloserine and lurasidone. The NMDA receptor of the brain is increasingly viewed as a key target for treating suicidal depression. However, to the best of our knowledge, NRX-101 is the first investigational medicine to advance to Phase 3 for severe bipolar depression in patients with Acute Suicidal Ideation and Behavior (“ASIB”). NRX-101 has not shown neurotoxicity or addiction. NRX-101 has been granted Fast Track Designation, Breakthrough Therapy Designation, and a Special Protocol Agreement (“SPA”) by the U.S. Food and Drug Administration (the “FDA”) for the treatment of severe bipolar depression in patients with ASIB after initial stabilization with ketamine or other effective therapy.
- ZYESAMI[®] (aviptadil), a sterile liquid for intravenous administration, was developed as an FDA Fast Track-designated, investigational drug for COVID-19 related respiratory failure. Aviptadil has previously been used in studies of Acute Respiratory Distress Syndrome (ARDS) and other respiratory conditions. Although the Company’s Phase IIb/III clinical study in patients with Acute Respiratory Failure in COVID-19 did not meet its primary endpoint of Alive and Free of Respiratory Failure at Day 60, data indicated a reduction in mortality compared to placebo. However, the U.S. National Institutes of Health (“NIH”) recently halted recruitment of a Phase III study of ZYESAMI for intravenous administration in patients with Critical COVID-19 (ACTIV-3b TESICO study) due to futility. As a result, the Company is shifting focus away from COVID-19 efforts, reallocating resources in favor of NRX-101, and will begin evaluating the options for ZYESAMI[®] in protecting the lungs in other respiratory disorders, as well as its potential in other therapeutic areas. Although the Company will evaluate the data from the NIH study when it becomes available, the likelihood and timing of a submission of ZYESAMI for any New Drug Application cannot be ascertained at this time.

We are re-initiating our psychiatry clinical work and expect to start a new registrational study of NRX-101 for severe bipolar depression in patients with ASIB after initial stabilization with ketamine (NRX-100), using newly-manufactured commercial level material in the second half of 2022. In addition, we are currently initiating a Phase II clinical study for bipolar depression with sub-acute suicidal ideation and behavior (“SSIB”). Furthermore, we are evaluating the potential of NRX-101 in post-traumatic stress disorder (“PTSD”), another area of high unmet need which is also associated with suicidality. NRX-100 is ketamine, which is a generic anesthetic, that is being used off-label in psychiatry. NRX-100 is part of a regimen of two sequential studies that we have agreed to with the FDA as part of our SPA for NRX-101 in the treatment of severe bipolar depression with ASIB. NRX-100 is not required as part of our outpatient protocol for treatment of SSIB.

Background

We were incorporated as Big Rock Partners Acquisition Corp. (“BRPA”) on September 18, 2017. On May 24, 2021, BRPA consummated the business combination (the “Business Combination”) with NeuroRx

pursuant to the Agreement and Plan of Merger dated December 13, 2020, as amended (the “Merger Agreement”), by and among our BRPA, NeuroRx and Big Rock Merger Corp (“Merger Sub”). As a result of the Business Combination, NeuroRx became a wholly-owned subsidiary of BRPA, and BRPA changed its name to NRX Pharmaceuticals, Inc. While BRPA was the legal acquirer of NeuroRx in the Business Combination, NeuroRx is deemed to be the accounting acquirer, and the historical financial statements of NeuroRx became the historical financial statements of BRPA upon the closing of the Business Combination.

At the effective time of the Business Combination (the “Effective Time”), each share of preferred stock and common stock of NeuroRx issued and outstanding immediately prior to the Effective Time was converted into the right to receive 3.16 shares of our Common Stock (or an aggregate of 44,419,279 shares) plus two earn out rights. The first earn out right was the right to receive 1.58 additional shares of our Common Stock (or an aggregate of 21,804,164 shares) if, prior to December 31, 2022, ZYESAMI receives Emergency Use Authorization (“EUA”) by the FDA, and NRx submits and the FDA files for review a new drug application for ZYESAMI (the “Earnout Shares Milestone”). The second earn out right was the right to receive approximately USD\$5.00 per share of NeuroRx common stock (or an aggregate of approximately \$88,800,000 after adjustments) upon the earlier to occur of (a) FDA approval of ZYESAMI and the listing of ZYESAMI in the FDA’s “Orange Book”, and (b) FDA’s approval of NRX-100 and NRX-101 and the listing of NRX- 100 and NRX-101 in the FDA’s “Orange Book”, in each case prior to December 31, 2022 (the occurrence of either clauses (a) or (b), the “Earnout Cash Milestone”). If the Earnout Shares Milestone is achieved, the shares of our Common Stock will be issued within five (5) business days after the occurrence of the Earnout Shares Milestone. If the Earnout Cash Milestone is achieved, the Merger Agreement does not require the earnout cash to be delivered to the former NeuroRx securityholders within any specified period of time, and the board of directors of NRx (the “Board”) will use its good faith judgment to determine the date to pay such cash.

On August 23, 2021, we consummated a private placement (the “August Private Placement”) pursuant to the terms and conditions of the Securities Purchase Agreement, dated as of August 19, 2021. At the closing of the August Private Placement, we issued 2,727,273 shares of Common Stock for a purchase price of \$11.00 per share and preferred investment options to purchase up to an aggregate of 2,727,273 shares of Common Stock for an exercise price of \$12.00 per share. On August 23, 2021, we also issued preferred investment options to purchase 136,364 shares of Common Stock for an exercise price of \$13.75 per share to the placement agents of the August Private Placement in lieu of certain professional fees associated with the August Private Placement (the “August 2021 placement agent options”).

On February 2, 2022, we consummated a private placement (the “Private Placement”) pursuant to the terms and conditions of the Securities Purchase Agreement, dated as of January 30, 2022 (the “Purchase Agreement”), with the selling securityholders. At the closing of the Private Placement, we issued 7,824,727 shares of Common Stock for a purchase price of \$3.195 per share and investment options to purchase up to an aggregate of 7,824,727 shares of Common Stock for an exercise price of \$3.07 per share.

On February 2, 2022, we issued placement agent options to purchase 391,236 shares of Common Stock for an exercise price of \$3.99375 per share to the placement agents of the Private Placement in lieu of certain professional fees associated with the Private Placement (the “Placement Agent Options”). The investment options issued to the selling securityholders and Placement Agent Options issued to the placement agent may be exercised starting six months from the date of issuance.

The rights of holders of our Common Stock and warrants are governed by our second amended and restated certificate of incorporation (the “Charter”), our second amended and restated bylaws (the “Bylaws”), and the Delaware General Corporation Law (the “DGCL”), and, in the case of the warrants, the Warrant Agreement, dated November 20, 2017, as amended, between us and Continental Stock Transfer and Trust Company (the “Warrant Agreement”). See the “Description of Capital Stock” section of this prospectus.

Summary of Risk Factors

Our business is subject to a number of risks of which you should be aware before making an investment decision. These risks are discussed more fully in the “*Risk Factors*” section of our annual report on Form 10-K, filed with the SEC on March 31, 2022. Some of the risks related to our business and industry are summarized below. Such risks include, but are not limited to:

- We have a limited operating history upon which to base an investment decision. We have not been profitable historically and may not achieve or maintain profitability in the future.
- We need to raise additional capital to operate our business. If we fail to obtain the capital necessary to fund our operations, we will be unable to continue or complete our product development.
- NRX-100, NRX-101, and ZYESAMI are still in Phase IIb/III of clinical testing, and our initial application to the FDA for Emergency Use Authorization for ZYESAMI was not granted.
- We have not yet scaled manufacturing of our drug products to levels that are required for sustained sales.
- The Company has been, and may become involved in, disputes, claims, arbitration and litigation, including our dispute with Relief Therapeutics.
- If we fail to obtain or maintain FDA and other regulatory clearances for our products, or if such clearances are delayed, we will be unable to commercially distribute and market our products in the U.S.
- Our products will face significant competition in the markets for such products and future products may never achieve market acceptance. We are faced with rapid technological change and developments by competitors may render our products or technologies obsolete or non-competitive.
- We do not anticipate obtaining orphan drug protection for the treatment of COVID-19.
- Our business activities have been disrupted due to the outbreak of the COVID-19 pandemic. Likewise, we are currently operating in a period of economic uncertainty and capital markets disruption, which has been significantly impacted by geopolitical instability due to the ongoing military conflict between Russia and Ukraine.
- Our relationships with customers and payors will be subject to applicable anti-kickback, fraud and abuse, transparency, and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, and administrative burdens.
- Managing our growth as we expand operations may strain our resources.
- Failure to achieve and maintain effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act could impair our ability to produce timely and accurate financial statements or comply with applicable regulations and have a material adverse effect on our business.
- Even if a drug product is approved, the regulators may impose limitations on the use or marketing of such product.
- If we are unable to design, conduct and complete clinical trials successfully, our drug candidates will not be able to receive regulatory approval. We cannot predict whether regulatory agencies will determine that the data from our clinical trials of our product candidates supports marketing approval.
- There is no guarantee that regulators will grant NDA approval of our current or future product candidates.
- If an adverse event occurs during a clinical trial, the regulators or an internal review board may delay or terminate the trial.
- Discussions and guidance of clinical trials are not binding obligations on the part of regulatory authorities. The results of our current or future clinical trials may not support our product candidate claims or may result in the discovery of unexpected adverse side effects.

- Delays in the commencement or completion of pharmaceutical development, manufacturing or clinical efficacy and safety testing could result in increased costs to us and delay our ability to generate revenues.
- Even if our products are approved by regulatory authorities, if we or our suppliers fail to comply with ongoing FDA regulation or if we experience unanticipated problems with our products, these products could be subject to market restrictions or withdrawals.
- Conducting clinical trials of our drug candidates or commercial sales of a drug candidate may expose us to expensive product liability claims and we may not be able to maintain product liability insurance on reasonable terms or at all.
- The use of a controlled substance in our NRX-100 drug candidate subjects us to DEA scrutiny and compliance, which may result in additional expense and clinical delays, and may generate controversy. In addition, the use of controlled substances may limit the availability of the active ingredients needed for NRX-100 and NRX-101.
- We may need to focus our future efforts in new therapeutic areas where we have little or no experience.
- Modifications to our products may require new NDA approvals and some of our other product candidates will require Risk Evaluation and Mitigation Strategies.
- Our formulation of ZYESAMI is not covered by an issued patent and may be subject to future generic competition. Our business relies on certain licensing rights that can be terminated in certain circumstances.
- Our business depends upon securing and protecting critical intellectual property. Our patent position is highly uncertain. If we are found to be infringing on patents or trade secrets owned by others, we may be forced to cease or alter our product development efforts, obtain a license to continue development or sale of our products, and/or pay damages.
- Breaches by our employees or other parties may allow our trade secrets to become known to our competitors.
- We may not receive royalty or milestone revenue relating to our product candidates under our collaboration and future license agreements for several years, or at all.
- We do not have direct control of third parties performing preclinical and clinical trials. If such third parties do not perform as contractually required or expected, we may not be able to obtain regulatory approval for or commercialize our products.
- We have no manufacturing capabilities and depend on other parties for manufacturing operations. These manufacturers may fail to satisfy our requirements and applicable regulatory requirements.
- Upon commercialization of our products, we may be dependent on third parties to market, distribute and sell our products. We may not be successful in contracting with third parties for these services on favorable terms.
- Our issuance of additional shares of Common Stock or convertible securities could make it difficult for another company to acquire us, may dilute your ownership of us and could adversely affect our stock price. Future sales, or the perception of sales, of our Common Stock by us or our existing stockholders could cause the market price for our Common Stock to decline.
- We qualify as an “emerging growth company” as well as a “smaller reporting company” within the meaning of the Securities Act, which could make our securities less attractive to investors and may make it more difficult to evaluate our performance.
- Anti-takeover provisions in our governing documents and under Delaware law could make an acquisition of us more difficult, limit attempts by our stockholders to replace or remove our current management and limit the market price of our Common Stock.
- Certain of our stockholders have effective control of NRx, and their interests may conflict with NRx’s or yours in the future. We are no longer a “controlled company” under the corporate governance rules of Nasdaq. However, during the applicable phase-in periods we may continue to rely on exemptions from certain corporate governance standards.

- The obligations associated with being a public company will involve significant expenses, and will require significant resources and management attention, which may divert from our business operations.
- We do not intend to pay dividends on our Common Stock for the foreseeable future.

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. (Nasdaq:BRPA). Upon the closing of the Business Combination, we changed our name to NRX Pharmaceuticals, Inc. The Company does not maintain a principal executive office. Our registered office is located at 1201 Orange Street, Suite 600, Wilmington, Delaware 19801 and our mailing address is at 1201 North Market Street, Suite 111, Wilmington, Delaware 19801. Our telephone number is (484) 254-6134. Our website address is www.nrxpharma.com. The information contained in, or accessible through, our website does not constitute a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Implications of Being an Emerging Growth Company

We qualify as an “emerging growth company” as defined in Section 2(a)(19) of the Securities Act of 1933, as amended (the “Securities Act”), as modified by the JOBS Act. As such, we will be eligible for and intend to take advantage of certain exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies for as long as it continues to be an emerging growth company, including (a) the exemption from the auditor attestation requirements with respect to internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act, (b) the exemptions from say-on-pay, say-on-frequency and say-on-golden parachute voting requirements and (c) reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements.

We will remain an emerging growth company until December 31, 2022. In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the exemption from complying with new or revised accounting standards provided in Section 7(a)(2)(B) of the Securities Act as long as we are an emerging growth company. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to opt out of such extended transition.

The Offering	
Common Stock Outstanding⁽¹⁾	66,641,314 shares as of May 11, 2022
Common Stock Offered for Resale by Selling Securityholders and Service Providers	43,437,808 shares of Common Stock
Common Stock Offered by the Company Upon Exercise of Investment Options and Warrants	14,665,850 shares of Common Stock
Exercise Price Per Share Pursuant to the Warrants	\$11.50
Exercise Price Per Share Pursuant to the August 2021 Investment Options	\$12.00
Exercise Price Per Share Pursuant to the August 2021 Placement Agent Options	\$13.75
Exercise Price Per Share Pursuant to the February 2022 Preferred Investment Options	\$3.07
Exercise Price Per Share Pursuant to the February 2022 Placement Agent Options	\$3.99375
Common Stock Outstanding After the Offering Assuming the Exercise of all of the Investment Options and Warrants for Which Shares of Common Stock are Registered Hereunder	81,307,164 shares of Common Stock
Use of Proceeds	We will not receive any proceeds from the sale of the Common Stock by the selling securityholders or selling service providers. We will receive proceeds upon the exercise of investment options and warrants for cash. We intend to use the proceeds from the exercise of investment options and warrants for cash for general corporate expenses, funding of clinical trial programs and working capital purposes. See “ <i>Use of Proceeds.</i> ”
Nasdaq Symbol for our Common Stock	“NRXP”
Risk Factors	You should carefully read the “ <i>Risk Factors</i> ” section of our annual report on Form 10-K and the other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our Common Stock.
<hr/> <p>(1) Excludes 14,665,850 issuable upon exercise of all of the Investment Options and Warrants for which shares of Common Stock are registered hereunder.</p>	

RISK FACTORS

You should carefully consider the risks and uncertainties described in this prospectus and in our annual report on [Form 10-K, filed with the SEC on March 31, 2022](#) as supplemented and updated by subsequent quarterly reports on Form 10-Q and current reports on Form 8-K that we have filed or will file with the SEC, which are incorporated by reference into this prospectus, before making an investment in our Common Stock. Our business, financial condition, results of operations, or prospects could be materially and adversely affected if any of these risks occurs, and as a result, the market price of our Common Stock could decline and you could lose all or part of your investment. This prospectus also contains forward-looking statements that involve risks and uncertainties. See the “*Cautionary Statement Regarding Forward-Looking Statements*” section of this prospectus. Our actual results could differ materially and adversely from those anticipated in these forward-looking statements as a result of certain factors, including those set forth below.

USE OF PROCEEDS

We are filing the registration statement of which this prospectus is a part to permit holders of the shares of our Common Stock described in the “*Selling Securityholders*” and “*Selling Service Providers*” sections of this prospectus to resell such shares. We will not receive any proceeds from the sale of the Common Stock by the selling securityholders or selling service providers.

The selling securityholders and selling service providers will pay all incremental selling expenses relating to the sale of their shares, including underwriters’ or agents’ commissions and discounts, brokerage fees, underwriter marketing costs and all reasonable fees and expenses of any legal counsel representing the securityholders or selling service providers. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, printing and delivery fees, Nasdaq listing fees and fees and expenses of our counsel and our accountants.

We are also registering the issuance of an aggregate of 14,665,850 shares of Common Stock upon the exercise of investment options and warrants. We will receive proceeds upon the exercise of investment options and warrants for cash. We intend to use the proceeds from the exercise of investment options and warrants for cash for general corporate expenses, funding of clinical trial programs and working capital purposes.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all available funds and future earnings, if any, for the operation and expansion of our business and do not anticipate declaring or paying any dividends in the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our Board after considering our financial condition, results of operations, capital requirements, business prospects and other factors the Board deems relevant, and subject to the restrictions contained in any financing instruments. Our ability to declare dividends may also be limited by restrictive covenants pursuant to any other future debt financing agreements.

DETERMINATION OF OFFERING PRICE

The selling stockholders and selling service providers will offer Common Stock at the prevailing market prices or privately negotiated price.

The offering price of our Common Stock does not necessarily bear any relationship to our book value, assets, past operating results, financial condition or any other established criteria of value. The facts considered in determining the offering price were our financial condition and prospects, our limited operating history and the general condition of the securities market.

In addition, there is no assurance that our Common Stock will trade at market prices in excess of the offering price as prices for Common Stock in any public market will be determined in the marketplace and may be influenced by many factors, including the depth and liquidity.

DESCRIPTION OF CAPITAL STOCK**General**

The following description summarizes some of the terms of our Charter and Bylaws and of the DGCL. This description is summarized from, and qualified in its entirety by reference to, our Charter and Bylaws, each of which has been publicly filed with the SEC, as well as the relevant provisions of the DGCL.

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 May 11, 2022, there were 66,641,314 shares of Common Stock outstanding. No shares of preferred stock have been issued or are outstanding. Unless our 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 have been issued.

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, unless 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 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".

SELLING SECURITYHOLDERS

The selling securityholders listed in the table below may from time to time offer and sell any or all of the shares of Common Stock set forth below pursuant to this prospectus. When we refer to the “selling securityholders” in this prospectus, we refer to the persons listed in the table below, and the pledgees, donees, transferees, assignees, successors and other permitted transferees that hold any of the selling securityholders’ interest in the shares of Common Stock after the date of this prospectus.

The following table sets forth information concerning the shares of Common Stock that may be offered from time to time by each selling securityholders. The number of shares beneficially owned by each selling securityholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. Percentage ownership is based on 66,641,314 shares of Common Stock issued and outstanding as of May 11, 2022 and assumes the full exercise of investment options, notwithstanding the existence of a restriction that precludes Armistice Capital (as defined below) from exercising any portion of the preferred investment options to the extent such exercise would result in Armistice Capital owning more than 4.99% of our outstanding shares of Common Stock. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of Common Stock subject to options, warrants or other rights held by such person that are currently exercisable or will become exercisable within 60 days of May 11, 2022 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. Unless noted otherwise, the address of all listed selling securityholders is c/o NRx Pharmaceuticals, Inc., 1201 N. Market Street, Suite 111, Wilmington, Delaware 19801. Each of the selling securityholders listed has sole voting and investment power with respect to the shares beneficially owned by the selling securityholders unless noted otherwise, subject to community property laws where applicable.

The following table sets forth certain information provided by or on behalf of the selling securityholders concerning the Common Stock that may be offered from time to time by each selling securityholder pursuant to this prospectus. In accordance with the terms of the Registration Rights Agreement with the selling securityholders, this prospectus generally covers the resale of the sum of (i) the number of shares of Common Stock issued to the selling securityholders, and (ii) the maximum number of shares of Common Stock issuable upon exercise of the related investment options, determined as if the outstanding investment options were exercised in full as of the trading day immediately preceding the date this prospectus was initially filed with the SEC, each as of the trading day immediately preceding the applicable date of determination and all subject to adjustment as provided in that certain Registration Rights Agreement, dated as of August 19, 2021, by and among us and the selling securityholders, without regard to any limitations on the exercise of the investment options. The fourth column assumes the sale of all of the shares offered by the selling securityholders pursuant to this prospectus. Under the terms of the investment options, a selling securityholder may not exercise the investment options to the extent such exercise would cause such selling securityholder, together with its affiliates and attribution parties, to beneficially own a number of shares of Common Stock which would exceed 4.99% or 9.99%, as applicable, of our then outstanding Common Stock following such exercise, excluding for purposes of such determination shares of Common Stock issuable upon exercise of such investment options which have not been exercised. The number of shares in the second and fourth columns do not reflect this limitation.

The selling securityholders identified below may have sold, transferred or otherwise disposed of all or a portion of their securities after the date on which they provided us with information regarding their securities. Any changed or new information given to us by the selling securityholders, including regarding the identity of, and the securities held by, each selling securityholders, will be set forth in a prospectus supplement or amendments to the Registration Statement of which this prospectus is a part, if and when necessary. A selling securityholder may sell all, some or none of such securities in this offering. See “*Plan of Distribution.*”

Name of Selling Stockholder	Shares Beneficially Owned Prior to the Offering		Number of Shares Being Offered	Shares Beneficially Owned After the Offering	
	Number	Percentage		Number	Percentage
Hartree Partners, LP ⁽¹⁾	100,000	*	100,000	—	*
Kepos Alpha Master Fund L.P. ⁽²⁾	250,000	*	250,000	—	*
Owl Creek Credit Opportunities Master Fund, LP ⁽³⁾	300,000	*	300,000	—	*
Linden Advisors LP ⁽⁴⁾	350,000	*	350,000	—	*
Jonathan Javitt ⁽⁵⁾	14,768,329	22.2%	14,768,329	—	*
Daniel Javitt ⁽⁵⁾	13,102,676	19.7%	13,102,676	—	*
EarlyBirdCapital, Inc. ⁽⁶⁾	593,933	*	393,933	200,000	*
GEM Yield Bahamas Limited ⁽⁷⁾	1,833,628	2.8%	1,833,628	—	*
Graubard Miller ⁽⁸⁾	40,000	*	40,000	—	*
Steve Levine ⁽⁹⁾	158,640	*	158,640	—	*
David Nussbaum ⁽¹⁰⁾	158,640	*	158,640	—	*
Stephen Vogel ⁽¹¹⁾	40,000	*	40,000	—	*
Robert Goldstein ⁽¹²⁾	48,000	*	48,000	—	*
BRMR LLC ⁽¹³⁾	40,000	*	40,000	—	*
Ed Kovary ⁽¹⁴⁾	57,248	*	57,248	—	*
G2 Investment Partners ⁽¹⁵⁾	48,000	*	48,000	—	*
R. Michael Powell ⁽¹⁶⁾	95,643	*	95,643	—	*
Jeff Johnson ⁽¹⁷⁾	8,000	*	8,000	—	*
A/Z Property Partners, LLC ⁽¹⁸⁾	83,300	*	83,300	—	*
Eileen Moore ⁽¹⁹⁾	8,159	*	8,159	—	*
Marc VanTricht ⁽²⁰⁾	9,748	*	9,748	—	*
Amy Kaufmann ⁽²¹⁾	3,269	*	3,269	—	*
I-Bankers Securities, Inc. ⁽²²⁾	37,485	*	37,485	—	*
BRAC Lending Group LLC ⁽²³⁾	38,000	*	38,000	—	*
Richard Ackerman ⁽²⁴⁾	270,991	*	270,991	—	*
JF International LLC ⁽²⁵⁾	151,602	*	151,602	—	*
Troy T. Taylor ⁽²⁶⁾	9,475	*	9,475	—	*
Albert G. Re ⁽²⁷⁾	42,638	*	42,638	—	*
Brownstone Realty Advisors, LLC ⁽²⁸⁾	47,375	*	47,375	—	*
MCT Trust ⁽²⁹⁾	47,375	*	47,375	—	*
Richard Thal ⁽³⁰⁾	18,950	*	18,950	—	*
Lori B. Wittman ⁽³¹⁾	34,475	*	34,475	—	*
Stuart Koeni ⁽³²⁾	19,007	*	19,007	—	*
Roger Gladstone ⁽³³⁾	342	*	342	—	*
Big Rock Partners Sponsor LLC ⁽³⁴⁾	13,334	*	13,334	—	*
3i LP ⁽³⁵⁾	500,000	*	500,000	—	*
Armistice Capital Master Fund Ltd ⁽³⁶⁾	13,974,108	19.0%	13,974,108	—	*
CVI Investments, Inc. ⁽³⁷⁾	1,888,320	2.8%	1,888,320	—	*
BPY Limited ⁽³⁸⁾	200,000	*	200,000	—	*
Nomis Bay Ltd ⁽³⁹⁾	300,000	*	300,000	—	*

Name of Selling Stockholder	Shares Beneficially Owned Prior to the Offering		Number of Shares Being Offered	Shares Beneficially Owned After the Offering	
	Number	Percentage		Number	Percentage
Sabby Volatility Warrant Master Fund, Ltd. ⁽⁴⁰⁾	3,383,128	5.0%	3,383,128	—	*
Intracoastal Capital LLC ⁽⁴¹⁾	858,444	1.3%	858,444	—	*
Michael Vasinkevich ⁽⁴²⁾	338,323	*	338,323	—	*
Kira Sheinerman ⁽⁴²⁾	100,244	*	100,244	—	*
Noam Rubinstein ⁽⁴²⁾	65,951	*	65,951	—	*
Craig Schwabe ⁽⁴²⁾	17,806	*	17,806	—	*
Charles Worthman ⁽⁴²⁾	5,276	*	5,276	—	*
Daniel Troy ⁽⁴³⁾	88,628	*	5,000	83,628	*
CH Health-Private Venture Capital Ltd. ⁽⁴⁴⁾	208,443	*	14,000	194,443	*
Cottingham-Hillcrest, Inc. ⁽⁴⁵⁾	13,168	*	1,000	12,168	*
Elizabeth Gorovitz ⁽⁴⁶⁾	16,678	*	1,200	15,478	*
Jeremy Paul Gorovitz 2017 Irrevocable Trust ⁽⁴⁷⁾	8,336	*	600	7,736	*
Lindsay Pritchard Nash Flynn 2010 Trust ⁽⁴⁸⁾	476,487	*	31,000	445,487	*
Marisa Shey Gorovitz 2017 Irrevocable Trust ⁽⁴⁹⁾	8,336	*	600	7,736	*
Nash-Flynn Investments, LLC ⁽⁵⁰⁾	362,332	*	23,000	339,332	*
Samuel David Gorovitz 2017 Irrevocable Trust ⁽⁵¹⁾	8,336	*	600	7,736	*
Shirat HaChaim Ltd. ⁽⁵²⁾	1,436,350	2.2%	93,000	1,343,350	2.0%
Whitney Prichard Nash Flynn 2010 Trust ⁽⁵³⁾	476,487	*	30,000	446,487	*
Wills Eye Hospital ⁽⁵⁴⁾	11,000	*	11,000	—	*
Princeton First Aid and Rescue Squad ⁽⁵⁵⁾	20,000	*	20,000	—	*
North American Friends of Moed, Inc. ⁽⁵⁶⁾	18,000	*	18,000	—	*

* Indicates less than 1%

- (1) The principal business address of Hartree Partners, LP is 1185 Avenue of the Americas, New York, NY 10036, Attn: Andrew Bailey.
- (2) The principal business address of Kepos Alpha Master Fund L.P. is 11 Times Square, 3rd Floor, New York, NY 10036, Attn: General Counsel.
- (3) The principal business address of Owl Creek Credit Opportunities Master Fund, LP is 640 Fifth Avenue, 20th Floor, New York, NY 10019, Attn: Steve Krause/Jason Danen/Dan Sapadin.
- (4) The principal business address of Linden Advisors LP is c/o Linden Advisors, 590 Madison Avenue, 15th Floor, New York, NY 10022, Attn: General Counsel.
- (5) Jonathan Javitt is NRx Pharmaceuticals' Chief Scientist and a director. Jonathan Javitt controls the Jonathan Javitt Living Trust and The Javitt 2012 Irrevocable Dynasty Trust. Daniel Javitt is a co-founder of NRx Pharmaceuticals and owns 100% of Glytech, LLC.
- (6) The principal business address of EarlyBirdCapital, Inc. ("EBC") is One Huntington Quadrangle, Suite 4C18, Melville, NY 11747. Each of David M. Nussbaum and Steven Levine may be deemed to

share control of the voting and investment power over the securities held by EBC. EBC is an affiliate of BRAC Lending Group LLC (“BRAC Lending”).

- (7) The principal business address of GEM Yield Bahamas Limited is Office of Lennox Paton Corporate Services Limited, Bayside Executive Park, Building 3, West Bay Street, P.O. Box N-4875, Nassau, Island of New Providence, Commonwealth of the Bahamas. Christopher F. Brown is the beneficial owner of all of the issued and outstanding shares of GEM Yield Bahamas Limited.
- (8) The principal business address of Graubard Miller is 405 Lexington Ave, 1th Floor, New York, NY 10174.
- (9) Mr. Levine’s business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. Levine is the Chief Executive Officer of EBC and a managing member of BRAC Lending. He may be deemed to share control of the voting and investment power over the securities held by EBC and BRAC Lending.
- (10) Mr. Nussbaum’s business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. Nussbaum is the Chairman of the Board of EBC and a managing member of BRAC Lending. He may be deemed to share control of the voting and investment power over the securities held by EBC and BRAC Lending.
- (11) Mr. Vogel was a member of BRAC Lending.
- (12) Mr. Goldstein was a member of BRAC Lending.
- (13) The principal business address of BRMR LLC is 68 Wheatley Road, Brookville, NY 11545. BRMR LLC was a member of BRAC Lending.
- (14) Mr. Kovary’s business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. Kovary is an employee of EBC.
- (15) The principal business address of G2 Investment Partners is 366 Madison Avenue, 8th Floor, New York, NY, 10017. G2 Investment Partners was a member of BRAC Lending. Richard Goldstein is the general partner of G2 Investment Partners and may be deemed to have voting and investment control over the shares held thereby.
- (16) Mr. Powell’s business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. Powell is an employee of EBC.
- (17) Mr. Johnson’s business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. Johnson is an employee of EBC.
- (18) The principal business address of A/Z Property Partners, LLC is 315 S. Beverly Drive, Suite 404, Beverly Hills, CA 90212. Richard Ackerman controls A/Z Property Partners, LLC.
- (19) Ms. Moore’s business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Ms. Moore was an employee of EBC.
- (20) Mr. VanTricht’s business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. VanTricht is an employee of EBC.
- (21) Ms. Kaufmann’s business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Ms. Kaufmann is an employee of EBC.
- (22) The principal business address of I-Bankers Securities Inc. is 535 Fifth Avenue, 4th Floor, New York, NY 10017.
- (23) The principal business address of BRAC Lending is c/o EarlyBirdCapital, Inc. 366 Madison Avenue, 8th Floor, New York, NY 10017. Each of David M. Nussbaum and Steven Levine is a managing member of BRAC Lending and may be deemed to share voting and investment control over the securities held thereby. BRAC Lending is an affiliate of EBC.

- (24) Includes an aggregate of 100,000 shares which may be forfeited if certain earnout conditions set forth in the Merger Agreement are not fulfilled. The principal business address of Richard Ackerman is c/o Big Rock Partners Sponsor LLC, 2645 N. Federal Highway, Suite 230, Delray Beach, FL 33483. Mr. Ackerman is a member of Big Rock Partners Sponsor LLC and is the former Chief Executive Officer and Chairman of the Company. Mr. Ackerman also controls A/Z Property Partners, LLC.
- (25) The principal business address of JF International LLC is c/o Michael Fong, 12133 Plantation Way, Palm Beach Gardens, FL 33418. Mr. Fong is a former director of the Company. JF International LLC is a member of Big Rock Partners Sponsor LLC.
- (26) The address of Troy T. Taylor is 2457 Collins Ave, PH2, Miami Beach, FL 33140. Mr. Taylor is a member of Big Rock Partners Sponsor LLC and a former director of the Company.
- (27) The address of Albert G. Rex is 15 Fishermans Cove, Unit A, Key Largo, FL 33037. Mr. Rex is a member of Big Rock Partners Sponsor LLC and a former director of the Company.
- (28) The principal business address of Brownstone Realty Advisors, LLC is 28562 Oso Parkway, Suite D522, Rancho Sta. Margarita, CA 92677. Michael Moers is the manager of Brownstone Realty Advisors, LLC. Brownstone Realty Advisors, LLC is a member of Big Rock Partners Sponsor LLC.
- (29) The principal business address of MCT Trust is c/o The Courtland Group Inc., 1005 Terminal Way, Suite 100, Reno, NV 89502-2179. John Steven Hooper is the trustee of the MCT Trust. MCT Trust is a member of Big Rock Partners Sponsor LLC.
- (30) The address of Richard Thal is 4278 NW 65th Rd, Boca Raton, FL 33496. Mr. Thal is a member of Big Rock Partners Sponsor LLC.
- (31) Includes an aggregate of 25,000 shares which may be forfeited if certain earnout conditions set forth in the Merger Agreement are not met. The address of Lori Wittman is 76 Logan Loop, Highland Park, IL 60035. Ms. Wittman is a member of Big Rock Partners Sponsor LLC and a former financial consultant to the Company.
- (32) The address of Stuart Koenig is 20155 NE 38th Court, Apt 1501, Aventura, FL 33180. Mr. Koenig is a member of Big Rock Partners Sponsor LLC and a former director of the Company.
- (33) The address of Roger Gladstone is 2000 S. Ocean Blvd., Apt 10K, Boca Raton, FL 33432. Mr. Gladstone is a member of Big Rock Partners Sponsor LLC.
- (34) The principal business address of Big Rock Partners Sponsor LLC is 2645 N. Federal Highway, Suite 230, Delray Beach, FL 33483. Richard Ackerman controls Big Rock Partners Sponsor LLC.
- (35) 3i Management LLC, the general partner of 3i, LP, has discretionary authority to vote and dispose of the shares held by 3i, LP and may be deemed to be the beneficial owner of these shares. Maier Joshua Tarlow, in his capacity as manager of 3i Management LLC, may also be deemed to have investment discretion and voting power over the shares held by 3i, LP. 3i Management LLC and Mr. Tarlow each disclaim any beneficial ownership of these shares. The principal business address of 3i LP is 140 Broadway FL 38, New York, NY 10005, Attn: Maier J. Tarlow.
- (36) The shares of Common Stock are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the “Master Fund”), and may be deemed to be indirectly beneficially owned by:
(i) Armistice Capital, LLC (“Armistice Capital”), as the investment manager of the Master Fund; and
(ii) Steven Boyd, as the Managing Member of Armistice Capital. Armistice Capital and Steven Boyd disclaim beneficial ownership of the securities except to the extent of their respective pecuniary interests therein. The number of shares beneficially owned prior to the offering by Armistice Capital assumes the full exercise of its preferred investment options, notwithstanding the existence of beneficial ownership limitations that preclude Armistice Capital from exercising any portion of the preferred investment options to the extent such exercise would result in Armistice Capital owning more than 4.99% of the Company’s outstanding shares of Common Stock. The principal business address of the Master Fund is c/o Armistice Capital, LLC, 510 Madison Ave, 7th Floor, New York, NY 10022.

- (37) Heights Capital Management, Inc., the authorized agent of CVI Investments, Inc. (“CVI”), has discretionary authority to vote and dispose of the shares held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, Inc., may also be deemed to have investment discretion and voting power over the shares held by CVI. Mr. Kobinger disclaims any such beneficial ownership of the shares. CVI is affiliated with one or more FINRA member, none of whom are currently expected to participate in the sale pursuant to the prospectus contained in this Registration Statement of the shares of Common Stock purchased by CVI in this offering. The principal business address of CVI Investments, Inc. is c/o Heights Capital Management, Inc., 101 California Street, Suite 3250, San Francisco, CA 94111, Attn: Martin Kobinger.
- (38) EOM Management Ltd. (“EOM”) is the investment manager of BPY Limited and has voting and investment power with respect to these shares in this capacity. Chaja Carlebach, in her capacity as Director of EOM, may also be deemed to have investment discretion and voting power over the shares held by BPY Limited. Each of Ms. Carlebach and EOM disclaims any beneficial ownership of these shares. The principal business address of BPY Limited is Wessex House 3rd Floor, 45 Reid Street, Hamilton, HM 12, Bermuda.
- (39) EOM Management Ltd. (“EOM”) is the investment manager of Nomis Bay Ltd. and has voting and investment power with respect to these shares in this capacity. Chaja Carlebach, in her capacity as Director of EOM, may also be deemed to have investment discretion and voting power over the shares held by Nomis Bay Ltd. Each of Ms. Carlebach and EOM disclaims any beneficial ownership of these shares. The principal business address of Nomis Bay is Wessex House 3rd Floor, 45 Reid Street, Hamilton, HM 12, Bermuda.
- (40) Sabby Management, LLC is the investment manager of Sabby Volatility Warrant Master Fund, Ltd. (“Sabby”) and shares voting and investment power with respect to these shares in this capacity. As manager of Sabby Management, LLC, Hal Mintz also shares voting and investment power on behalf of Sabby. Each of Sabby Management, LLC and Mr. Mintz disclaims beneficial ownership over the securities listed except to the extent of their pecuniary interest therein. The principal business address of Sabby Volatility Warrant Master Fund, Ltd. and Sabby Management, LLC is 10 Mountainview Road, Suite 205, Upper Saddle River, New Jersey 07458.
- (41) Mitchell P. Kopin and Daniel B. Asher, each of whom are managers of Intracoastal Capital LLC (“Intracoastal”), have shared voting control and investment discretion over the securities reported herein that are held by Intracoastal. As a result, each of Mr. Kopin and Mr. Asher may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of the securities reported herein that are held by Intracoastal. The principal business address of Intracoastal Capital LLC is 245 Palm Trail, Delray Beach, FL 33483.
- (42) Consists of shares of Common Stock issuable upon exercise of the preferred investment options. The principal business address of the Selling Securityholder is c/o H.C. Wainwright & Co., LLC, 430 Park Avenue, 3rd Floor, New York, NY 10022.
- (43) Daniel Troy is a director of NRX Pharmaceuticals, Inc. The principal business address of Mr. Troy is c/o NRX Pharmaceuticals, Inc., 1201 N. Market Street, Suite 111, Wilmington, Delaware 19801.
- (44) Chaim Hurvitz is a director of NRX Pharmaceuticals, Inc. and is the owner of CH Health-Private Venture Capital Ltd. Mr. Hurvitz may be deemed to share control of the voting and investment power over the securities held by CH Health-Private Venture Capital Ltd. The principal business address of CH Health-Private Venture Capital Ltd. is c/o NRX Pharmaceuticals, Inc., 1201 N. Market Street, Suite 111, Wilmington, Delaware 19801.
- (45) Sherry A. Glied is a director of NRX Pharmaceuticals, Inc. and is the owner of Cottingham-Hillcrest, Inc. Ms. Glied may be deemed to share control of the voting and investment power over the securities held by Cottingham-Hillcrest, Inc. The principal business address of Cottingham-Hillcrest, Inc. is 430 West 116th, 7E, New York, NY 10027.

- (46) Elizabeth Gorovitz is the wife of Aaron Gorovitz. Mr. Gorovitz is a director of NRX Pharmaceuticals, Inc. and may be deemed to share control of the voting and investment power over the securities held by Ms. Gorovitz. The principal business address of Ms. Gorovitz is 2006 Wayhaven Court, Maitland, FL 32751
- (47) Aaron Gorovitz is the trustee of Jeremy Paul Gorovitz 2017 Irrevocable Trust. Mr. Gorovitz is a director of NRX Pharmaceuticals, Inc. and may be deemed to share control of the voting and investment power over the securities held by Jeremy Paul Gorovitz 2017 Irrevocable Trust. The principal business address of Jeremy Paul Gorovitz 2017 Irrevocable Trust is 2006 Wayhaven Court, Maitland, FL 32751.
- (48) Patrick J. Flynn is the trustee of Lindsay Pritchard Nash Flynn 2010 Trust. Mr. Flynn is a director of NRX Pharmaceuticals, Inc. and may be deemed to share control of the voting and investment power over the securities held by Lindsay Pritchard Nash Flynn 2010 Trust. The principal business address of Lindsay Pritchard Nash Flynn 2010 Trust is 1410-2 Monument Street, Concord, MA 01742.
- (49) Aaron Gorovitz is the trustee of Marisa Shey Gorovitz 2017 Irrevocable Trust. Mr. Gorovitz is a director of NRX Pharmaceuticals, Inc. and may be deemed to share control of the voting and investment power over the securities held by Marisa Shey Gorovitz 2017 Irrevocable Trust. The principal business address of Marisa Shey Gorovitz 2017 Irrevocable Trust is 2006 Wayhaven Court, Maitland, FL 32751.
- (50) Patrick J. Flynn is the owner of Nash-Flynn Investments, LLC. Mr. Flynn is a director of NRX Pharmaceuticals, Inc. and may be deemed to share control of the voting and investment power over the securities held by Nash-Flynn Investments, LLC. The principal business address of Nash-Flynn Investments, LLC is 1410-2 Monument Street, Concord, MA 01742.
- (51) Aaron Gorovitz is the trustee of Samuel David Gorovitz 2017 Irrevocable Trust. Mr. Gorovitz is a director of NRX Pharmaceuticals, Inc. and may be deemed to share control of the voting and investment power over the securities held by Samuel David Gorovitz 2017 Irrevocable Trust. The principal business address of Samuel David Gorovitz 2017 Irrevocable Trust is 2006 Wayhaven Court, Maitland, FL 32751.
- (52) Chaim Hurvitz is the owner of Shirat HaChaim Ltd. Mr. Hurvitz is a director of NRX Pharmaceuticals, Inc. and may be deemed to share control of the voting and investment power over the securities held by Shirat HaChaim Ltd. The principal business address of Shirat HaChaim Ltd. is 28 Ha'arbaha St, South Tower, 13 Floor, Tel Aviv, Israel, 6473925.
- (53) Patrick J. Flynn is the trustee of Whitney Prichard Nash Flynn 2010 Trust. Mr. Flynn is a director of NRX Pharmaceuticals, Inc. and may be deemed to share control of the voting and investment power over the securities held by Whitney Prichard Nash Flynn 2010 Trust. The principal business address of Whitney Prichard Nash Flynn 2010 Trust is 1410-2 Monument Street, Concord, MA 01742.
- (54) The principal business address of Wills Eye Hospital is 840 Walnut Steet, Philadelphia, PA 19107.
- (55) The principal business address of Princeton First Aid and Rescue Squad is 2 Mount Lucas Road, Princeton, NJ 08540.
- (56) The principal business address of North American Friends of Moed, Inc. is 897 Lakeside Dr, Woodmere, NY 11598.

SELLING SERVICE PROVIDERS

The Common Stock being offered by the selling service providers are those previously issued to the selling service providers. We are registering the shares of Common Stock in order to permit the selling service providers to offer the shares for resale from time to time. When we refer to the “selling service providers” in this prospectus, we refer to the persons listed in the table below, and the pledgees, donees, transferees, assignees, successors and other permitted transferees that hold any of the selling service providers’ interest in the shares of Common Stock after the date of this prospectus.

Except for the ownership of the shares of Common Stock, Congregation Bnai Tzedek has not had any material relationship with us within the past three years. In addition to its ownership of the shares of Common Stock, since March 2021, Pinkston Group LLC has been engaged from time to time by us to provide advice on media relations, external communications and related services pursuant to a series of work orders under one or more master service agreements. Pinkston Group LLC received its shares in partial payment for its services under these agreements. None of the agreements with Pinkston Group LLC are related party transactions.

The following table sets forth information concerning the shares of Common Stock that may be offered from time to time by each selling service provider. The selling service providers may sell all, some or none of their shares in this offering. See the “*Plan of Distribution*” section of this prospectus.

Name of Selling Service Provider	Shares Beneficially Owned Prior to the Offering		Number of Shares Being Offered	Shares Beneficially Owned After the Offering	
	Number	Percentage		Number	Percentage
Pinkston Group LLC ⁽¹⁾	4,000	*	4,000	—	*
Congregation Bnai Tzedek ⁽²⁾	4,545	*	4,545	—	*

(1) The principal business address of Pinkston Group LLC is 3110 Fairview Park Drive, Suite 1400, Falls Church Virginia 22042.

(2) The principal business address of Congregation Bnai Tzedek is 10621 South Glen Road, Potomac, Maryland 20854.

PLAN OF DISTRIBUTION

Each selling securityholder and selling service provider, and any of their respective pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on the Nasdaq Global Market or any other stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. A selling securityholder or selling service provider may use any one or more of the following methods when selling the securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the selling securityholders, or selling service providers as the case may be, to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling securityholders and selling service providers, may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling securityholders or selling service providers may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling securityholders or selling service providers (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

In connection with the sale of the securities or interests therein, the selling securityholders or selling service providers may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The selling securityholders or selling service providers may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The selling securityholders or selling service providers may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling securityholders, the selling service providers and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling securityholder and selling service provider, has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. We have agreed to indemnify the selling securityholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the selling securityholders and selling service providers without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for us to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect, or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the Common Stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling securityholders and selling service providers will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the Common Stock by the selling securityholders, and selling service providers or any other person. We will make copies of this prospectus available to the selling securityholders and selling service providers and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

The validity of the shares of Common Stock offered hereby have been passed upon for us by Paul, Weiss, Rifkind, Wharton & Garrison LLP.

EXPERTS

The consolidated financial statements of NRX Pharmaceuticals, Inc. as of December 31, 2021 and 2020, and for each of the years then ended have been incorporated by reference herein in reliance upon the report of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC registration statements on Form S-1 under the Securities Act with respect to the shares of Common Stock offered hereby. This prospectus, which constitutes a part of this Registration Statement, does not contain all of the information set forth in the registration statements or the exhibits and schedules filed therewith. For further information about us and the Common Stock offered hereby, we refer you to the registration statements and the exhibits and schedules filed thereto. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the Registration Statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the Registration Statement. We file periodic reports, proxy statements, and other information with the SEC pursuant to the Exchange Act. You may read and copy this information at the Public Reference Room of the SEC, 100 F Street, N.E., Room 1580, Washington, District of Columbia, 20549. You may obtain information on the operation of the public reference rooms by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy statements and other information about registrants, like us, that file electronically with the SEC. The address of that site is www.sec.gov.

INCORPORATION OF DOCUMENTS BY REFERENCE

We are “incorporating by reference” in this prospectus certain documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information in the documents incorporated by reference is considered to be part of this prospectus. Statements contained in documents that we file with the SEC and that are incorporated by reference in this prospectus will automatically update and supersede information contained in this prospectus, including information in previously filed documents or reports that have been incorporated by reference in this prospectus, to the extent the new information differs from or is inconsistent with the old information. We have filed or may file the following documents with the SEC and they are incorporated herein by reference as of their respective dates of filing.

1. [Our Annual Reports on Form 10-K for the year ended December 31, 2021, as amended, as filed with the SEC on March 31, 2022;](#)
2. [Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, as filed with the SEC on May 16, 2022;](#) and
3. Our Current Reports on Form 8-K as filed with the SEC on [February 3, 2022](#), [February 11, 2022](#), [March 9, 2022](#), [March 18, 2022](#), [May 25, 2022](#), [May 31, 2022](#) and [June 8, 2022](#).

All documents that we filed with the SEC pursuant to Sections 13(a), 13(c), 14, and 15(d) of the Exchange Act subsequent to the date of this registration statement and prior to the filing of a post-effective amendment to this registration statement that indicates that all securities offered under this prospectus have been sold, or that deregisters all securities then remaining unsold, will be deemed to be incorporated in this registration statement by reference and to be a part hereof from the date of filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated by reference in this prospectus shall be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus, or in any subsequently filed document that also is deemed to be incorporated by reference in this prospectus, modifies, supersedes or replaces such statement. Any statement so modified, superseded or replaced shall not be deemed, except as so modified, superseded or replaced, to constitute a part of this prospectus. None of the information that we disclose under Items 2.02 or 7.01 of any Current Report on Form 8-K or any corresponding information, either furnished under Item 9.01 or included as an exhibit therein, that we may from time to time furnish to the SEC will be incorporated by reference into, or otherwise included in, this prospectus, except as otherwise expressly set forth in the relevant document. Subject to the foregoing, all information appearing in this prospectus is qualified in its entirety by the information appearing in the documents incorporated by reference.

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost (other than exhibits, unless such exhibits are specifically incorporate by reference), by contacting the General Counsel, c/o NRx Pharmaceuticals, Inc., 1201 N. Market Street, Suite 111, Wilmington, Delaware 19801, or by telephone at (484) 254-6134. Information about us is also available at our website at www.nrxpharma.com. The information in our website is not a part of this prospectus and is not incorporated by reference.

You should rely only on the information contained in this document. We have not authorized anyone to provide you with information that is different. This document may only be used where it is legal to sell these securities. The information in this document may only be accurate on the date of this document.

Additional risks and uncertainties not presently known or that are currently deemed immaterial may also impair our business operations. The risks and uncertainties described in this document and other risks and uncertainties which we may face in the future will have a greater impact on those who purchase our common stock. These purchasers will purchase our common stock at the market price or at a privately negotiated price and will run the risk of losing their entire investment.



NRX Pharmaceuticals, Inc.
58,103,658 Shares of Common Stock

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the expenses in connection with this registration statement. All of such expenses are estimates, other than the filing fees payable to the Securities and Exchange Commission and to FINRA.

Description	Amount to be Paid
Filing Fee – Securities and Exchange Commission	\$1,441.30
Attorney’s fees and expenses	*
Accountant’s fees and expenses	*
Total	\$1,441.30

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 102 of the General Corporation Law of the State of Delaware permits a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our restated certificate of incorporation provides that no director of the Registrant shall be personally liable to it or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability, except to the extent that the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty.

Section 145 of the General Corporation Law of the State of Delaware provides that a corporation has the power to indemnify a director, officer, employee, or agent of the corporation, or a person serving at the request of the corporation for another corporation, partnership, joint venture, trust or other enterprise in related capacities against expenses (including attorneys’ fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he was or is a party or is threatened to be made a party to any threatened, ending or completed action, suit or proceeding by reason of such position, if such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

We have entered into indemnification agreements with each of our directors and officers. These indemnification agreements may require us, among other things, to indemnify our directors and officers for some costs and expenses (including reasonable attorneys’ fees), judgments, fines, losses, claims, damages or liabilities incurred by a director or officer in any action or proceeding arising out of his or her service as one of our directors or officers, or any of our subsidiaries or any other company or enterprise to which the person provides services at our request.

We maintain a general liability insurance policy that covers certain liabilities of directors and officers of our corporation arising out of claims based on acts or omissions in their capacities as directors or officers.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

a) Exhibits

Exhibit		Incorporated by Reference Exhibit		
		Form	Exhibit	Filing Date
2.1	Agreement and Plan of Merger, dated as of December 13, 2020	S-4	2.1	05/21/2021
2.2	First Amendment to Agreement and Plan of Merger, dated as of January 27, 2021	S-4	2.2	05/21/2021
2.3	Second Amendment to Agreement and Plan of Merger, dated as of March 19, 2021	S-4	2.3	05/21/2021
3.1	Second Amended and Restated Certificate of Incorporation	8-K	3.1	05/28/2021
3.2	Second Amended and Restated By-Laws	8-K	3.2	05/28/2021
4.1	Warrant Agreement, dated as of November 20, 2017, by and between BRPA and Continental Stock Transfer & Trust Company	8-K	4.2	11/22/2017
4.2	Form of Unit Purchase Option, dated November 20, 2017, with EarlyBirdCapital, Inc. and its designees	8-K	4.3	11/22/2017
5.1	Opinion of Paul, Weiss, Rifkind, Wharton & Garrison LLP	S-1	5.1	09/03/2021
5.2	Opinion of Paul, Weiss, Rifkind, Wharton & Garrison LLP	S-1	5.1	07/06/2021
5.3	Opinion of Kirkland & Ellis LLP	S-1	5.1	04/08/2022
10.1	Form of Securities Purchase Agreement, dated as of August 19, 2021, by and among the Company and the Selling Securityholders.	8-K	10.1	08/24/2021
10.2	Form of Preferred Investment Options, dated as of August 23, 2021, by and among the Company and the Selling Securityholders.	8-K	10.2	08/24/2021
10.3	Form of Registration Rights Agreement, dated as of August 19, 2021, by and among the Company and the Selling Securityholders.	8-K	10.3	08/24/2021
10.4	Form of Lock-Up Agreement, dated as of August 19, 2021, by and among the Company, Jonathan Javitt and Daniel Javitt.	8-K	10.4	08/24/2021
10.5	Stock Escrow Agreement, dated November 20, 2017, between BRPA, Big Rock Partners Sponsor, LLC and Continental Stock Transfer & Trust Company	8-K	10.2	11/22/2017
10.6	Registration Rights Agreement among BRPA and Big Rock Partners Sponsor, LLC	8-K	10.3	11/22/2017
10.7	Agreement, dated November 17, 2018, among BRPA, Big Rock Partners Sponsor, LLC and BRAC Lending Group LLC	8-K	10.1	11/20/2018
10.8	Stock Escrow Agent Letter, dated November 17, 2018	8-K	10.2	11/20/2018
10.9	Registration Rights Assignment Agreement, dated November 17, 2018	8-K	10.3	11/20/2018
10.10	Amendment to the Stock Escrow Agreement, dated May 24, 2021, among BRPA, Continental Stock Transfer & Trust Company, and the stockholder parties thereto	8-K	10.6	05/28/2021
10.11	Lock-up Agreement, dated May 24, 2021, by and between BRPA and the stockholder parties identified therein	8-K	10.7	05/28/21
10.12	Registration Rights Agreement, dated May 24, 2021, by and among NRx Pharmaceuticals, Inc., certain equityholders of the Registrant named therein and certain equityholders of NeuroRx named therein	8-K	10.8	05/28/21
10.13	Sponsor Agreement, dated May 24, 2021, by and among BRPA, the Big Rock Partners Sponsor, LLC, and BRAC Lending Group LLC	8-K	10.9	05/28/21

Exhibit		Incorporated by Reference Exhibit		
		Form	Exhibit	Filing Date
10.14	NRx Pharmaceuticals, Inc. 2021 Omnibus Incentive Plan	S-4	10.22	05/21/21
10.15	Form of Subscription Agreement	8-K	10.1	03/15/21
10.16	Development and License Agreement, dated as of May 2, 2016, between Glytech, LLC and NeuroRx	S-4	10.24	05/21/21
10.17	Amendment to Development and License Agreement, dated as of October 19, 2016, between Glytech, LLC and NeuroRx	S-4	10.25	05/21/21
10.18	Second Amendment to Amended and Restated Development and License Agreement, dated as of June 13, 2018, between Glytech, LLC and NeuroRx	S-4	10.26	05/21/21
10.19	Third Amendment to Amended and Restated Development and License Agreement, dated as of April 16, 2019, between Glytech, LLC and NeuroRx	S-4	10.27	05/21/21
10.20	Fourth Amendment to Amended and Restated Development and License Agreement, dated as of December 31, 2020, between Glytech, LLC and NeuroRx	S-4	10.28	05/21/21
10.21	Exclusive License Agreement, dated as of April 16, 2019, by and between NeuroRx and Sarah Herzog Memorial Hospital Ezrat Nashim	S-4	10.29	05/21/21
10.22	License and Option Agreement, dated as of September 1, 2020, between The Research Foundation For The State University of New York and NeuroRx	S-4	10.30	05/21/21
10.23	Binding Collaboration Agreement, dated as of September 18, 2020, between Relief Therapeutics Holding Aktiengesellschaft and its wholly owned subsidiary Therametrics Discovery Aktiengesellschaft and NeuroRx	S-4	10.31	05/21/21
10.24	Exclusive Distribution Agreement, dated as of September 25, 2020, between NeuroRx and Cardinal Health 105, Inc.	S-4	10.32	05/21/21
10.25	Executive Employment Agreement, dated May 20, 2015, between NeuroRx and Jonathan C. Javitt	S-4	10.33	05/21/21
10.26	“Work for Hire” Agreement, dated as of March 1, 2016, between NeuroRx and REBes Consulting LLC — Robert Besthof	S-4	10.34	05/21/21
10.27	Amendment to “Work for Hire” Agreement, dated as of October 23, 2016, between NeuroRx and 20REBes Consulting LLC — Robert Besthof	S-4	10.35	05/21/21
10.28	Consulting Agreement, dated as of January 1, 2021, between NeuroRx and Del Buono Legal, PLLC	S-4	10.36	05/21/21
10.29	Feasibility Study and Material Transfer Agreement, dated as of January 6, 2021, by and between NeuroRx and TFF Pharmaceuticals, Inc.	S-4	10.37	05/21/21
10.30	Manufacturing Supply Agreement, dated as of August 25, 2020, by and among NeuroRx, Nephron SC, Inc. and Nephron Pharmaceutical Corporation	S-4	10.38	05/21/21
10.31	Amendment #1 to Manufacturing Supply Agreement, dated as of September 2, 2020, by and among NeuroRx, Nephron SC, Inc. and Nephron Pharmaceutical Corporation	S-4	10.39	05/21/21

Exhibit		Incorporated by Reference Exhibit		
		Form	Exhibit	Filing Date
10.32	Amendment #2 to Manufacturing Supply Agreement, dated as of November 5, 2020, by and among NeuroRx, Nephron SC, Inc. and Nephron Pharmaceutical Corporation	S-4	10.40	05/21/21
10.33	Amendment #3 to Manufacturing Supply Agreement, dated as of February 5, 2021, by and among NeuroRx, Nephron SC, Inc. and Nephron Pharmaceutical Corporation	S-4	10.41	05/21/21
10.34	Share Subscription Facility Agreement, dated as of October 18, 2019, among NeuroRx, GEM Global Yield LLC SCS and GEM Yield Bahamas Limited	S-4	10.42	05/21/21
10.35	Common Stock Purchase Warrant dated March 28, 2021	S-4	10.43	05/21/21
10.36	Clinical Trial Participation Agreement, dated as of December 17, 2020, by and between Quantum Leap Health Care Collaborative and NeuroRx	S-4	10.44	05/21/21
10.37	Consulting Agreement with Randolph Guggenheimer III	8-K	10.33	05/28/21
10.38	Voting Agreement by and between Jonathan Javitt and Daniel Javitt	8-K	10.34	05/28/21
10.38	Statement of Work, dated July 26, 2021, between Pilltracker Ltd. and NeuroRx, Inc.	10-Q	10.1	11/15/21
10.40	Form of Securities Purchase Agreement, dated as of January 30, 2022, by and among the Company and the Purchasers	8-K	10.1	02/03/22
10.41	Form of Preferred Investment Options, dated as of February 2, 2022, by and among the Company and the holders	8-K	10.2	02/03/22
10.42	Form of Registration Rights, dated as of January 30, 2022, by and among the Company and the Purchasers	8-K	10.3	02/03/22
10.43	Form of Placement Agent Preferred Investment Option, dated as of February 2, 2022 by and among the Company and H.C. Wainwright & Co., LLC	8-K	10.4	02/03/22
10.44	Consulting Agreement, dated March 8, 2022, by and between the Company and Dr. Jonathan Javitt	8-K	10.1	03/09/22
10.45	Letter Agreement, dated March 9, 2022, by and between NeuroRx, Inc. and REBes Consulting LLC — Robert Besthof	8-K	10.2	03/09/22
10.46	Pill Tracker Supplemental Task Order, dated November 15, 2021	10-K	10.46	03/31/22
23.1	Consent of KPMG LLP		*	
23.2	Consent of Paul, Weiss, Rifkind, Wharton & Garrison LLP (included in Exhibit 5.1)		**	
24.1	Power of Attorney (included on signature page of this Post-Effective Amendment No. 1 on Form S-3 to Form S-1)		*	
107	Filing Fee Table		*	

* Filed herewith.

** Previously filed.

b) Financial Statement Schedules

All financial statement schedules have been omitted since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and notes thereto.

ITEM 17. UNDERTAKINGS

The undersigned registrant hereby undertakes:

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

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

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act to any purchaser:
 - (i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
 - (ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration

statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

- (5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (h) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement on Form S-3 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Wilmington, State of Delaware, on June 8, 2022.

NRX PHARMACEUTICALS, INC.

By: /s/ Robert Besthof
 Name: Robert Besthof
 Title: Interim Chief Executive Officer

Each person whose signature appears below constitutes and appoints each of Robert Besthof and Ira Strassberg, acting alone or together with another attorney-in-fact, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for such person and in his or her name, place and stead, in any and all capacities, to sign any or all further amendments (including post-effective amendments) to this registration statement (and any additional registration statement related hereto permitted by Rule 462(b) promulgated under the Securities Act of 1933 (and all further amendments, including post-effective amendments, thereto)), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-3 has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Robert Besthof</u> Robert Besthof	Interim Chief Executive Officer (Principal Executive Officer)	June 8, 2022
<u>*</u> Ira Strassberg	Chief Financial Officer (Principal Financial and Accounting Officer)	June 8, 2022
<u>*</u> Patrick J. Flynn	Director	June 8, 2022
<u>*</u> Sherry A. Glied	Director	June 8, 2022
<u>*</u> Aaron Gorovitz	Director	June 8, 2022
<u>*</u> Chaim Hurvitz	Director	June 8, 2022
<u>*</u> Daniel Troy	Director	June 8, 2022

*By: /s/ Robert Besthof
 Name: Robert Besthof
 Title: Interim Chief Executive Officer



KPMG LLP
New Jersey Headquarters
51 John F. Kennedy Parkway
Short Hills, NJ 07078-2702

Consent of Independent Registered Public Accounting Firm

We consent to the use of our report dated March 31, 2022, with respect to the consolidated financial statements of NRx Pharmaceuticals, Inc., incorporated herein by reference and to the reference to our firm under the heading "Experts" in the registration statement.

KPMG LLP

Short Hills, New Jersey
June 8, 2022

KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.

Calculation of Filing Fee Tables

Form S-3
(Form Type)

NRx Pharmaceuticals, Inc.
(Exact Name of Registrant as Specified in its Charter)

Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered(1)	Proposed Maximum Offering Price Per Unit(2)	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Newly Registered Securities							
Fees to be Paid	Common Stock, par value \$0.0001 per share (the "Common Stock")	Rule 457(c)	11,102,676(3)	\$ 0.65	\$ 7,216,739.40	0.0000927	\$ 668.99
Equity	Common Stock	Rule 457(c)	12,768,329(4)	\$ 0.65	\$ 8,299,413.85	0.0000927	\$ 769.36
Equity	Common Stock	Rule 457(c)	49,000(5)	\$ 0.65	\$ 31,850	0.0000927	\$ 2.95
Fees Previously Paid(6)	Common Stock	—	7,824,727(7)	—	—	—	—
Equity	Common Stock	—	8,215,963(7)	—	—	—	—
Equity	Common Stock	—	2,935,818(8)	—	—	—	—
Equity	Common Stock	—	2,863,637(8)	—	—	—	—
Equity	Common Stock	—	8,757,258(9)	—	—	—	—
Equity	Common Stock	—	3,586,250(9)	—	—	—	—
Carry Forward Securities							
Carry Forward Securities	—	—	—	—	—	—	—
Total Offering Amounts					—	—	\$ 1,441.30
Total Fees Previously Paid					—	—	—
Total Fee Offsets					—	—	—
Net Fees Due					—	—	\$ 1,441.30

- (1) Pursuant to Rule 416 of the Securities Act of 1933, as amended, the shares of Common Stock offered hereby also include such presently indeterminate number of shares of the registrant's Common Stock as a result of stock splits, stock dividends or similar transactions.
- (2) Estimated in accordance with Rule 457(c) solely for purposes of calculating the registration fee. The maximum price per security and the maximum aggregate offering price are based on the average of the high and low sale price of the Registrant's Common Stock as reported on the Nasdaq on June 7, 2022 (\$0.65 per share).
- (3) Represents 11,102,676 shares of Common Stock held by Glytech, LLC, all of which are being registered for sale and beneficially owned by Daniel Javitt.
- (4) Represents (i) 11,299,997 shares of Common Stock held by the Jonathan Javitt Living Trust, (ii) 1,422,000 shares of Common Stock held by The Javitt 2012 Irrevocable Dynasty Trust, and (iii) 46,332 shares of Common Stock held by Jonathan Javitt, all of which are being registered for sale and beneficially owned by Jonathan Javitt.
- (5) Represents (i) 11,000 shares of Common Stock held by Wills Eye Hospital, (ii) 20,000 shares of Common Stock held by Princeton First Aid and Rescue Squad, and (iii) 18,000 shares of Common Stock held by North American Friends of Moed, Inc., all of which are being registered for sale.
- (6) The share amounts listed in this table reflect the number of shares originally registered by the registrant and do not reflect any subsequent sales or the deregistration of any shares. Accordingly, all registration fees have been previously paid.
- (7) Represents (i) 7,824,727 shares of Common Stock registered for sale by the selling securityholders and (ii) 8,215,963 shares of Common Stock issuable upon exercise of preferred investment options and placement agent preferred investment options on the registrant's registration statement on Form S-1 (File No. 333-264201) that was declared effective by the Securities and Exchange Commission ("SEC") on April 19, 2022.
- (8) Represents (i) 2,927,273 shares of Common Stock registered for sale by the selling securityholders, (ii) 8,545 shares of Common Stock registered for sale by the selling service providers, and (iii) 2,863,637 shares of Common Stock issuable upon exercise of preferred investment options and placement agent preferred investment options to purchase shares of Common Stock on the registrant's registration statement on Form S-1 (File No. 333-259336) that was declared effective by SEC on September 15, 2021.
- (9) Represents (i) 8,757,258 shares of Common Stock registered for sale by the selling securityholders and (ii) 3,586,250 shares of Common Stock issuable upon exercise of warrants to purchase shares of Common Stock on the registrant's registration statement on Form S-1, as amended (File No. 333-257438) that was declared effective by the SEC on July 9, 2021.