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

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Quarterly Period Ended: March 31, 2023

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File Number: 001-38302

NRX PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**82-2844431**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

1201 Orange Street, Suite 600
Wilmington, DE 19801
(Address of principal executive offices) (Zip Code)

(484) 254-6134
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class:	**Trading Symbol(s)**	**Name of each exchange on which registered:**
Common Stock, par value $0.001 per share	NRXP	The Nasdaq Stock Market LLC
Warrants to purchase one share of Common Stock	NRXPW	The Nasdaq Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer ☐	Accelerated filer ☐
	Smaller reporting company ☒
Non-accelerated filer ☒	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 pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of May 12, 2023, the registrant had 70,309,655 shares of common stock outstanding.

PART I FINANCIAL INFORMATION

ITEM 1. Financial Statements

NRX PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

	March 31, 2023 (Unaudited)	December 31, 2022
ASSETS		
Current assets:		
Cash and cash equivalents	$ 16,506	$ 20,054
Prepaid expenses and other current assets	5,250	5,741
Total current assets	21,756	25,795
Other assets	24	21
Total assets	$ 21,780	$ 25,816
LIABILITIES AND STOCKHOLDERS' (DEFICIT) EQUITY		
Current liabilities:		
Accounts payable	$ 3,776	$ 2,076
Accrued and other current liabilities	5,054	4,855
Accrued clinical site costs	1,020	914
Convertible note payable and accrued interest - short term	12,189	7,703
Warrant liabilities	25	37
Total current liabilities	22,064	15,585
Convertible note payable and accrued interest - long term	—	2,822
Total liabilities	$ 22,064	$ 18,407
Preferred stock, $0.001 par value, 50,000,000 shares authorized; 0 shares issued and outstanding at March 31, 2023 and December 31, 2022, respectively	—	—
Common stock, $0.001 par value, 500,000,000 shares authorized; 70,309,655 and 66,442,989 shares issued and outstanding at March 31, 2023 and December 31, 2022, respectively	70	67
Additional paid-in capital	233,576	230,339
Accumulated other comprehensive income	106	—
Accumulated deficit	(234,036)	(222,997)
Total stockholders' (deficit) equity	(284)	7,409
Total liabilities and stockholders' (deficit) equity	$ 21,780	$ 25,816

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

NRX PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(in thousands, except share and per share data)

(Unaudited)

	Three months ended March 31,	
	2023	2022
Operating expenses:		
Research and development	$ 3,650	$ 5,483
General and administrative	5,785	10,222
Total operating expenses	9,435	15,705
Loss from operations	(9,435)	(15,705)
Other (income) expenses:		
Interest income	(156)	—
Interest expense	—	3
Change in fair value of convertible note payable	1,772	—
Change in fair value of warrant liabilities	(12)	(157)
Change in fair value of Earnout Cash liability	—	(2,103)
Total other (income) expenses	1,604	(2,257)
Net loss	$ (11,039)	$ (13,448)
Change in fair value of convertible note attributed to credit risk	(106)	—
Other comprehensive income	(106)	—
Comprehensive loss	$ (10,933)	$ (13,448)
Net loss per share:		
Basic and diluted	$ (0.16)	$ (0.21)
Weighted average common shares outstanding:		
Basic and diluted	67,453,897	63,667,468

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

NRX PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' (DEFICIT) EQUITY
(in thousands, except share data)
(Unaudited)

	Common Stock		Additional Paid-in-Capital	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' (Deficit) Equity
	Shares	Amount				
Balance December 31, 2022	**66,442,989**	**$ 67**	**$ 230,339**	**$ (222,997)**	**$ —**	**$ 7,409**
Common stock and warrants issued, net of issuance costs $351	3,866,666	3	2,542	—	—	2,545
Change in fair value of convertible note attributed to credit risk	—	—	—	—	106	106
Stock-based compensation	—	—	695	—	—	695
Net loss	—	—	—	(11,039)	—	(11,039)
Balance - March 31, 2023	**70,309,655**	**$ 70**	**$ 233,576**	**$ (234,036)**	**$ 106**	**$ (284)**

	Common Stock		Additional Paid-in-Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
Balance - December 31, 2021	**58,810,550**	**$ 59**	**$ 203,990**	**$ (183,243)**	**$ 20,806**
Common stock and warrants issued in private placement, net of issuance costs of $2,020	7,824,727	8	22,972	—	22,980
Common stock issued for consulting services	6,037	—	17	—	17
Stock-based compensation	—	—	1,334	—	1,334
Net loss	—	—	—	(13,448)	(13,448)
Balance - March 31, 2022	**66,641,314**	**$ 67**	**$ 228,313**	**$ (196,691)**	**$ 31,689**

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

NRX PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(Unaudited)

	Three months ended March 31,	
	2023	**2022**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (11,039)	$ (13,448)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	1	1
Stock-based compensation	695	1,334
Change in fair value of warrant liabilities	(12)	(157)
Change in fair value of earnout cash liability	—	(2,103)
Change in fair value of convertible promissory note	1,772	—
Non-cash interest expense	—	2
Changes in operating assets and liabilities:		
Prepaid expenses and other assets	491	1,727
Accounts payable	1,698	624
Accrued expenses and other liabilities	305	1,640
Net cash used in operating activities	(6,089)	(10,380)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of computer equipment	(4)	(3)
Net cash used in investing activities	(4)	(3)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of common stock and warrants issued in private placement, net of issuance costs	2,545	22,980
Net cash provided by financing activities	2,545	22,980
Net (decrease) increase in cash and cash equivalents	(3,548)	12,597
Cash and cash equivalents at beginning of period	20,054	27,605
Cash and cash equivalents at end of period	$ 16,506	$ 40,202
Supplemental disclosure of cash flow information:		
Non-cash investing and financing activities		
Issuance of common stock warrants as offering costs	$ —	$ 726
Issuance of common stock for settlement of accrued liability	$ —	$ 17

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

NRX PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. Organization

The Business

On May 24, 2021 ("Effective Time"), we consummated the business combination ("Merger") contemplated by the Agreement and Plan of Merger (as amended, the "Merger Agreement"), dated December 13, 2020, by and among our company (formerly known as Big Rock Partners Acquisition Corp. ("BRPA")), NeuroRx, Inc., a Delaware corporation ("NeuroRx"), Big Rock Merger Corp., a Delaware corporation and wholly-owned, direct subsidiary of BRPA ("Merger Sub"), pursuant to which Merger Sub was merged with and into NeuroRx, with NeuroRx surviving the Merger. As a result of the Merger, and upon consummation of the Merger and other transactions contemplated by the Merger Agreement, NeuroRx became a wholly-owned, direct subsidiary of BRPA. Upon the closing of the Merger, we changed our name to NRX Pharmaceuticals, Inc., with the stockholders of NeuroRx becoming stockholders of NRX Pharmaceuticals, Inc. Unless the context suggests otherwise, references to "NRx Pharmaceuticals," "NeuroRx", "NRXP," "we," or the "Company" refer to NRX Pharmaceuticals, Inc. and, where appropriate, its subsidiaries.

The Company is a clinical-stage pharmaceutical company which applies innovative science to known molecules to develop life-saving medicines through its wholly-owned operating subsidiary, NeuroRx. The Company's foundation product, NRX-101 (D-cylcoserine/Lurasidone), for the treatment of bipolar depression in patients with suicidality, has been awarded Fast Track designation, Breakthrough Therapy designation, a Special Protocol Agreement, and a Biomarker Letter of Support by the U.S. Food and Drug Administration (the "FDA"). NRX-101 is covered by multiple U.S. and foreign patents, including a Composition of Matter patent (U.S. Patent No. 10,583,138) that was transferred to NRx Pharmaceuticals by Glytech, LLC.

Operations

The Company is engaged in the development of NRX-101, a fixed dose combination of D-cycloserine and lurasidone for the treatment of suicidal bipolar depression and potentially for other future indications. NRX-101 has been granted Fast Track Designation, Breakthrough Therapy Designation, a Special Protocol Agreement, and a Biomarker Letter of Support by the US Food and Drug Administration (FDA). In January 2023 the Company met with the FDA and was guided to expand its intended use of NRX-101 from the original population of patients with acute suicidality who might be treated in the hospital environment to the broader population of patients with subacute suicidal ideation (now described by the Company as Treatment-Resistant Bipolar Depression) who are treated in the outpatient setting. This broader population of patients are the current target population of the ongoing clinical trial.

Based on the guidance of FDA and the Company's completion of manufacturing for phase 3/commercial stage investigational product, the Company upgraded the ongoing clinical trial to a phase 2b/3 trial, the results of which have the potential to be used for registrational filings. The Company is engaged in that ongoing clinical trial of NRX-101 vs. lurasidone in patients with treatment-resistant bipolar depression with the objective of demonstrating a decreased in depression scores and scores of suicidal ideation in patients treated with NRX-101 compared to those treated with lurasidone alone.

The clinical trial was originally begun as an exploratory study in Q2 2022. In Q1 2023 the study's independent Data Safety Monitoring Board (DSMB) reviewed both safety and unblinded efficacy data for the first 50 patients in the clinical trial and advised the Company that no safety concerns were identified. Moreover, the DSMB did not identify a futility signal, suggesting that the trial has potential to demonstrate a statistically significant outcome with additional enrollment. On this basis, the DSMB advised management to continue enrolling study participants.

During the first quarter of 2023, the Company refined its ability to validate the psychometric ratings that are used to assess the efficacy endpoints for the clinical trial. The Company relies upon a team of veteran raters who both train independent

site rates and monitor the technical quality of each rating. A standard was set of 90% or better concordance between the Company's veteran rating team and site raters. This standard was met for all study participants whose ratings were obtained in their primary language and management believes that this standard can be maintained for the duration of the trial.

In April 2023, the Company contracted with 1nHealth to initiate a recruitment campaign that may cover up to 45 states in the US to recruit sufficient participants for this enlarged trial. The Company has similarly broadened its relationship with Science 37, a contract research organization that conducts decentralized clinical trials, to enroll participants identified by the 1nHealth recruitment initiative and randomize them to be treated within the broadened clinical trial. 1nHealth has additionally engaged "The Mighty," a voice-of-the-patient organization with national reach to publicize the clinical trial to the 800,000+ subscribers who have indicated a focus on bipolar depression and suicidality.

In Q1 2023, the Company announced the participation of Prof. Andrew Nierenberg, M.D., Head of the Massachusetts General Hospital (MGH) Dauton Family Center for Bipolar Treatment Innovation as the Principal Investigator of the clinical trial. The Company has now initiated clinical trial sites at Northwestern University (Chicago) and University of Texas, Austin, in addition to commercial research sites.

The Company has continued to engage in a strategic conversation focused on funding the drug approval and commercialization. In parallel, the Company has established an ongoing dialogue with Streeterville Capital LLC, the Company's current debt lender, to configure the Company's current debt facility to best support the ongoing needs of the clinical trial.

The Company has now completed manufacture of all clinical supplies required for its ongoing clinical trials. This initiative is expected to yield stability data sufficient to support a shelf life in excess of two years at time of potential drug launch (should the clinical trials be successful). The completion of this manufacturing milestone may allow the Company to decrease ongoing expenditure associated with manufacturing and development of chemical manufacturing controls.

2. Liquidity

As of March 31, 2023, the Company had $16.5 million in cash. Since inception, the Company has experienced net losses and negative cash flows from operations each fiscal year. The Company has no revenues and expects to continue to incur operating losses for the foreseeable future and may never become profitable. The Company believes that it has the funds necessary to support its ongoing clinical trial, which is expected to be completed in the fourth quarter of 2023. The Company's ability to support its ongoing capital needs is dependent on its ability to continue to raise equity and/or debt financing to continue operations.

The Company is dependent on its ability to continue to raise equity and/or debt financing to continue operations.

On March 8, 2023, NRx Pharmaceuticals entered into a securities purchase agreement (the "Securities Purchase Agreement") with accredited investors (the "Investors"), providing for the issuance and sale of 3,866,666 shares of the Company's common stock ("Common Stock") and warrants to purchase up to 3,866,666 shares of Common Stock (the "Investor Warrants") in a registered direct offering priced at-the-market under Nasdaq rules for a purchase price of $0.75 per share (the "Offering"). The Investor Warrants have an exercise price of $0.75 per share, are exercisable beginning on September 8, 2023 (the "Initial Exercise Date") and will expire 5 years from the Initial Exercise Date. The aggregate gross proceeds to the Company from the Offering were approximately $2.9 million. The Company intends to use the net proceeds from such offering for working capital and general corporate purposes. The closing of the sale of these securities occurred on March 9, 2023.

NRX PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

The Company's ongoing clinical activities continue to generate losses and net cash outflows from operations. The Company plans to pursue additional equity or debt financing or refinancing opportunities in 2023 to fund ongoing clinical activities, to meet obligations under its current debt arrangements and for the general corporate purposes of the Company. Such arrangements may take the form of loans, equity offerings, strategic agreements, licensing agreements, joint ventures or other agreements. The sale of equity could result in additional dilution to the Company's existing shareholders. The Company cannot make any assurances that additional financing will be available to it and, if available, on acceptable terms, or that it will be able to refinance its existing debt obligations which could negatively impact the Company's business and operations and could also lead to a reduction in the Company's operations. We will continue to carefully monitor the impact of our continuing operations on our working capital needs and debt repayment obligations. As such, the Company has concluded that substantial doubt exists about the Company's ability to continue as a going concern for a period of at least twelve months from the date of issuance of these unaudited condensed consolidated financial statements. The Company may raise substantial additional funds, and if it does so, it may do so through one or more of the following: issuance of additional debt or equity and/or the completion of a licensing or other commercial transaction for one of the Company's product candidates.

The accompanying unaudited condensed consolidated financial statements have been prepared on a going concern basis, which contemplates the realization of assets and satisfaction of liabilities in the ordinary course of business. The financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that may be necessary if the Company is unable to continue as a going concern.

3. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying unaudited interim condensed financial statements have been prepared in accordance with generally accepted accounting principles in the United States of America ("GAAP") as determined by the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") for interim financial information. Accordingly, they do not include all of the information and footnotes required by GAAP for complete financial statements. In the opinion of management, the unaudited interim condensed financial statements reflect all adjustments, which include only normal recurring adjustments, necessary for the fair presentation of the balance sheet, statements of operations and cash flows for the interim periods presented. The results of operations for any interim periods are not necessarily indicative of the results that may be expected for the entire fiscal year or any other interim period.

Use of Estimates

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities and expenses and the disclosure of contingent assets and liabilities in its financial statements and the reported amounts of expenses during the reporting period. The most significant estimates in the Company's financial statements relate to the convertible note payable, Earnout Cash liability, stock options, warrants, and the valuation allowance of deferred tax assets resulting from net operating losses. These estimates and assumptions are based on current facts, historical experience and various other factors believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities and the recording of expenses that are not readily apparent from other sources. Actual results may differ materially and adversely from these estimates. To the extent there are material differences between the estimates and actual results, the Company's future results of operations will be affected.

NRX PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Certain Risks and Uncertainties

The Company's activities are subject to significant risks and uncertainties including the risk of failure to secure additional funding to properly execute the Company's business plan. The Company is subject to risks that are common to companies in the pharmaceutical industry, including, but not limited to, development by the Company or its competitors of new technological innovations, dependence on key personnel, reliance on third party manufacturers, protection of proprietary technology, and compliance with regulatory requirements.

Fair Value of Financial Instruments

ASC 820, *Fair Value Measurements*, provides guidance on the development and disclosure of fair value measurements. Under this accounting guidance, fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability.

The accounting guidance classifies fair value measurements in one of the following three categories for disclosure purposes:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Inputs other than Level 1 prices for similar assets or liabilities that are directly or indirectly observable in the marketplace.

Level 3: Unobservable inputs which are supported by little or no market activity and values determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant judgment or estimation. (Refer to Note 10)

Concentration of Credit Risk and Off-Balance Sheet Risk

Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents. Cash equivalents are occasionally invested in certificates of deposit. The Company maintains each of its cash balances with high-quality and accredited financial institutions and accordingly, such funds are not exposed to unusual credit risk beyond the normal credit risk associated with commercial banking relationships. Deposits in financial institutions may, from time to time, exceed federally insured limits. The Company has not experienced any losses on its deposits of cash. The Company maintains a portion of its cash and cash equivalent balances in the form of a money market account with a financial institution that management believes to be creditworthy.

Research and Development Costs

The Company's research and development expenses consist primarily of costs associated with the Company's clinical trials, salaries, payroll taxes, employee benefits, and stock-based compensation charges for those individuals involved in ongoing research and development efforts. Research and development costs are expensed as incurred. Advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received.

NRX PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Convertible Note Payable

As permitted under Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 825, Financial Instruments ("ASC 825"), the Company elects to account for its convertible promissory note, which meets the required criteria, at fair value at inception and at each subsequent reporting date. Subsequent changes in fair value are recorded as a component of non-operating loss in the consolidated statements of operations. The portion of total changes in fair value of the convertible note attributable to changes in instrument-specific credit risk are determined through specific measurement of periodic changes in the discount rate assumption exclusive of base market changes and are presented as a component of comprehensive income in the accompanying Unaudited Condensed Consolidated Statements of Operations and Comprehensive Loss. As a result of electing the fair value option, direct costs and fees related to the convertible promissory notes are expensed as incurred.

The Company estimates the fair value of the convertible note payable using a Monte Carlo simulation model, which uses as inputs the fair value of our common stock and estimates for the equity volatility and volume volatility of our common stock, the time to expiration of the convertible note, the risk-free interest rate for a period that approximates the time to expiration, and probability of default. Therefore, we estimate our expected future volatility based on the actual volatility of our common stock and historical volatility of our common stock utilizing a lookback period consistent with the time to expiration. The time to expiration is based on the contractual maturity date, giving consideration to the mandatory and potential accelerated redemptions beginning six months from the issuance date. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of measurement for time periods approximately equal to the time to expiration. Probability of default is estimated using Bloomberg's Default Risk function which uses our financial information to calculate a default risk specific to the Company.

Stock-Based Compensation

The Company expenses stock-based compensation to employees and non-employees over the requisite service period based on the estimated grant-date fair value of the awards. The Company accounts for forfeitures as they occur. Stock-based awards with graded-vesting schedules are recognized on a straight-line basis over the requisite service period for each separately vesting portion of the award. The Company estimates the fair value of stock option grants using the Black-Scholes option pricing model, and the assumptions used in calculating the fair value of stock-based awards represent management's best estimates and involve inherent uncertainties and the application of management's judgment. All stock-based compensation costs are recorded in general and administrative or research and development costs in the consolidated statements of operations based upon the underlying individual's role at the Company.

Warrants

The Company accounts for warrants as either equity-classified or liability-classified instruments based on an assessment of the warrant's specific terms and applicable authoritative guidance in ASC 480, *Distinguishing Liabilities from Equity* ("ASC 480") and ASC 815, *Derivatives and Hedging* ("ASC 815"). The assessment considers whether the warrants are freestanding financial instruments pursuant to ASC 480, meet the definition of a liability pursuant to ASC 480, and whether the warrants meet all of the requirements for equity classification under ASC 815, including whether the warrants are indexed to the Company's own common stock and whether the warrant holders could potentially require "net cash settlement" in a circumstance outside of the Company's control, among other conditions for equity classification. This assessment, which requires the use of professional judgment, is conducted at the time of warrant issuance and as of each subsequent quarterly period end date while the warrants are outstanding.

For issued or modified warrants that meet all of the criteria for equity classification, the warrants are required to be recorded as a component of additional paid-in capital at the time of issuance. For issued or modified warrants that do not meet all

the criteria for equity classification, the warrants are required to be liability classified and recorded at their initial fair value on the date of issuance and remeasured at fair value and each balance sheet date thereafter. Changes in the estimated fair value of the warrants are recognized as a non-cash gain or loss on the statements of operations. The fair value of the Placement Warrants was estimated using a Black Scholes valuation approach and the fair value of the Substitute Warrants was estimated using a modified Black Scholes valuation approach which applies a probability factor based on the probabilities of achieving Earnout Cash Milestone and/or Earnout Shares Milestone at each reporting period (see Notes 8 and 10).

Income Taxes

Income taxes are recorded in accordance with ASC 740, *Income Taxes* ("ASC 740"), which provides for deferred taxes using an asset and liability approach. The Company recognizes deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. Valuation allowances are provided, if based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized. The Company accounts for uncertain tax positions in accordance with the provisions of ASC 740. When uncertain tax positions exist, the Company recognizes the tax benefit of tax positions to the extent that the benefit would more likely than not be realized assuming examination by the taxing authority. The determination as to whether the tax benefit will more likely than not be realized is based upon the technical merits of the tax position as well as consideration of the available facts and circumstances. The Company recognizes any interest and penalties accrued related to unrecognized tax benefits as income tax expense.

Loss Per Share

Basic loss per share of common stock is computed by dividing net loss attributable to common stockholders by the weighted average number of shares of common stock outstanding for the period. Diluted loss per share reflects the potential dilution that could occur if stock options, restricted stock awards and warrants were to vest and be exercised. Diluted earnings per share excludes, when applicable, the potential impact of stock options, common stock warrant shares, convertible notes, and other dilutive instruments because their effect would be anti-dilutive in the periods in which the Company incurs a net loss.

The following outstanding shares of common stock equivalents were excluded from the computation of the diluted net loss per share attributable to common stock for the periods in which a net loss is presented because their effect would have been anti-dilutive.

	Three Months Ended March 31,	
	2023	2022
Stock options	2,548,849	2,906,948
Restricted stock awards	1,000,000	—
Common stock warrants	20,351,589	17,521,753
Earnout Shares	—	22,209,280
Earnout Shares from exercised Substitute Options and Substitute Warrants	—	1,229,925

NRX PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and are adopted by the Company as of the specified effective date. For the three-months ended March 31, 2023, there were no new accounting pronouncements or updates to recently issued accounting pronouncements disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2022, that management believes materially affect the Company's present or future results of operations, overall financial condition, liquidity or disclosures.

4. Prepaid Expenses and Other Current Assets

Prepaid expenses and other current assets consisted of the following at the dates indicated (in thousands):

	March 31, 2023 (Unaudited)	December 31, 2022
Prepaid expenses and other current assets:		
Prepaid clinical development expenses	$ 3,253	$ 1,966
Prepaid insurance	1,510	3,167
Other prepaid expenses	322	331
Prepaid legal expenses	159	270
Other current receivables	6	7
Total prepaid expenses and other current assets	$ 5,250	$ 5,741

5. Accrued and Other Current Liabilities

Accrued and other current liabilities consisted of the following at the dates indicated (in thousands):

	March 31, 2023 (Unaudited)	December 31, 2022
Accrued and other current liabilities:		
Other accrued expenses	$ 2,720	$ 2,616
Accrued employee expenses	1,149	923
Accrued research and development expenses	928	974
Professional services	257	342
Total accrued and other current liabilities	$ 5,054	$ 4,855

6. Debt

Convertible Note

On November 4, 2022, the Company entered into a Securities Purchase Agreement ("SPA") with Streeterville Capital, LLC, a Utah limited liability company ("Lender"), and, pursuant to the SPA, issued to the Lender an unsecured promissory note with a face amount of approximately $11.0 million (the "Note") before an original issue discount of $1.0 million, which was deducted from the proceeds of the Note.

The Note carries a 9% interest rate, has a term of 18 months from the issuance date (the "Maturity Date") and is redeemable as described below. Any time after the issuance date, the Company has the right to prepay all or any portion of the outstanding balance of the Note. If the Company exercises its right to prepay the Note, the Company will make payment

to the Lender of an amount in cash equal to 110% multiplied by the portion of the outstanding balance the Company elects to pay. Beginning on May 4, 2023, the Lender has the right to redeem up to $1.0 million ("Maximum Monthly Redemption Amount") of the outstanding balance of such Note per month. Payments may be made by the Company, at the Company's option, (a) in cash with a 10% premium for the amount redeemed, (b) by paying the redemption amount in the form of shares of Common Stock with the number of redemption shares being equal to the portion of the applicable redemption amount divided by the Redemption Conversion Price or (c) a combination of cash and shares of Common Stock. The "Redemption Conversion Price" shall equal 85% multiplied by the average of the two lowest daily volume weighted average prices per share of the Common Stock during the 15 trading days immediately preceding the date that the Lender delivers notice electing to redeem a portion of the Note. The Company's right to satisfy the redemption amount in shares of Common Stock is subject to certain limitations, including (i) there not being any Equity Conditions Failure (as defined in the Note) and (ii) the Lender not owning more than 4.99% of the outstanding shares of Common Stock. At any time, if market capitalization is less than $25.0 million, the 4.99% ownership limitation shall be increased to 9.99%. On March 30, 2023, the Company amended the Note to increase the ownership limitation to 9.99%. If the Company elects to prepay the Note prior to the Maturity Date or elects to pay a portion or all of the Maximum Monthly Redemption Amount in cash, it must pay a premium of 10%, subject to certain exceptions.

The Company has the right to make the required payments for the above Note in common stock subject to certain conditions including ownership and trading volume limitations. If the Company is not able to make the required payments for the above Note in common stock and must use cash for these payments, management believes that the Company does not have sufficient liquidity to support operations.

Beginning May 1, 2023, in the event (a) the daily dollar trading volume of the Common Stock of the Company on any given trading day is at least fifty percent (50%) greater than the lower of (i) the median daily dollar trading volume over the previous ten (10) trading days or (ii) the daily dollar trading volume on the trading day immediately preceding the date of measurement or (b) if the closing trade price on any given trading day is at least thirty percent (30%) greater than the Nasdaq Minimum Price (as defined in the Note), then the Lender will be entitled to redeem over the following ten (10) trading days an amount of indebtedness then outstanding under the Note equal to twice (2x) the monthly redemption amount of $1.0 million solely by payment by Common Stock, subject to maximum percentage (9.99%) and other ownership limitations under the SPA and the Note.

The Note contains certain Trigger Events (as defined in the Note) that generally, if uncured within five (5) trading days, may result in an event of default in accordance with the terms of the Notes (such event, an "Event of Default"). Upon an Event of a Default, the Lender may consider the Note immediately due and payable. Upon an Event of Default, the interest rate may also be increased to the lesser of 18% per annum or the maximum rate permitted under applicable law. As of March 31, 2023, the Company was in compliance with the Note terms and there were no Events of Default.

Due to these embedded features within the Note, the Company elected to account for the Note at fair value at inception. Subsequent changes in fair value are recorded as a component of other income (loss) in the Consolidated Statements of Operations.

The Company estimates the fair value of the convertible note payable using a Monte Carlo simulation model, which uses as inputs the fair value of our common stock and estimates for the equity volatility and volume volatility of our common stock, the time to expiration of the convertible note, the risk-free interest rate for a period that approximates the time to expiration, and probability of default. Therefore, we estimate our expected future volatility based on the actual volatility of our common stock and historical volatility of our common stock utilizing a lookback period consistent with the time to expiration. The time to expiration is based on the contractual maturity date, giving consideration to the mandatory and potential accelerated redemptions beginning six months from the issuance date. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of measurement for time periods approximately equal to

the time to expiration. Probability of default is estimated using Bloomberg's Default Risk function which uses our financial information to calculate a default risk specific to the Company.

The discount to the principal amount is included in the carrying value of the Note. During 2022, the Company recorded a debt discount of approximately $1.0 million upon issuance of the Note for the original issue discount of $1.0 million. As a result of electing the fair value option, any direct costs and fees related to the Note was expensed as incurred. For the three months ended March 31, 2023, the Company recorded a change in fair value of approximately $1.8 million related to the change in fair value of the Note which was recognized in other income (expense) on the Unaudited Condensed Consolidated Statement of Operations as a result of the Company's election of the fair value option.

The following table presents the Note as of March 31, 2023 (in thousands):

	March 31, 2023	December 31, 2022
	(Unaudited)	
Par value of the Note	$ 11,020	$ 11,020
Debt discount	(497)	(1,000)
Carrying value of the Note before current period change in fair value	10,523	10,020
Fair value adjustment through earnings	1,772	505
Fair value adjustment through accumulated other comprehensive income	(106)	—
Total carrying value of Note	$ 12,189	$ 10,525
Convertible note payable - current portion	$ 12,189	$ 7,703
Convertible note payable, net of current portion	$ —	$ 2,822

7. Commitments and Contingencies

Operating Lease

The Company leases office space on a month-to-month basis. The rent expense for the three months ended March 31, 2023 and 2022 was less than $0.1 million and $0.1 million, respectively.

Sponsored Research Agreement with National Jewish Health

On February 8, 2021, the Company entered into a Sponsored Research Agreement ("Research Agreement") with National Jewish Health ("NJ Health"), a Colorado not-for-profit institution. Under the terms of the Research Agreement, the Company agreed to sponsor a research study at NJ Health relating to the impact of the Company's' Aviptadil on propagation of SARS-CoV-2 in alveolar type II cells in vitro (the "Study"). In return for performance of the Study under the Research Agreement, the Company has committed to pay NJ Health approximately $0.4 million upon finalization of the work. As of March 31, 2023, the Company has fully paid NJ Health the total committed amount under this agreement.

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Relief Therapeutics Collaboration Agreement

On September 18, 2020, the Company entered into a collaboration agreement (the "Collaboration Agreement") with Relief Therapeutics for the clinical development and, if approved, the sale of Aviptadil. The Collaboration Agreement provides for funding by Relief Therapeutics of certain clinical trials, formulation and manufacturing of Aviptadil, as well as establishing specified sales territories for each party and share of the profits in those territories for "Product" as defined in the Collaboration Agreement. On October 6, 2021, Relief Therapeutics filed a lawsuit against the Company and its former CEO claiming that the Company failed to honor its obligations under the Collaboration Agreement, which was followed by a counter claim from the Company for breach and repudiation of the Collaboration Agreement by Relief Therapeutics.

On November 12, 2022, the Company entered into a Settlement Agreement and Asset Purchase Agreement ("APA") with Relief Therapeutics Holding AG and Relief Therapeutics International (the "Relief Parties") to settle the outstanding lawsuit with respect to the Collaboration Agreement.

Under the APA, the Company transferred to the Relief Parties all of the Company's interest in ZYESAMI (or the "Product" as such term is defined in the Collaboration Agreement), including intellectual property, FDA applications, clinical trial data, drug and API inventory and certain contractual rights. The Company has agreed to refrain from developing any product for any indication that uses or otherwise exploits the Product without the Relief Parties' consent.

The Relief Parties have agreed to use commercially reasonable efforts to develop, market, and commercialize the Product, but has sole discretion to select the indications for which it will seek to develop the Product. Although the Company intends to monitor the progress of the Relief Parties under the APA and enforce the Company's rights thereunder, there can be no assurances that the Relief Parties will be successful at commercializing the Product.

Upon commercial launch of the Product by the Relief Parties or any of their affiliates, licensees or sublicensees (or upon authorization of use for any indication of the Product other than COVID-19), the Company is entitled to receive milestone payments in stages up to an aggregate amount of $13.0 million. The Relief Parties have also agreed to pay royalties to the Company on aggregate net sales of all Products, subject to a cap on royalty payments of $30.0 million in the aggregate. In addition, Relief is obligated to use commercially reasonable efforts to continue the Company's existing Right to Try Program for at least two (2) years after the closing of the APA.

Mutual indemnity provisions in the APA will protect each party from any breaches of the settlement arrangements by the other party, provided, that the Company's indemnity obligations will not start until the Relief Parties have begun making royalty or milestone payments to the Company, subject to certain exceptions. With respect to the Company, there is an indemnity threshold such that the Company will not be liable for any indemnity claims until such claims are in excess of $0.5 million (and then only for the amount above $0.5 million). The Company's indemnity obligation is capped at $2.0 million with respect to breaches of representations and warranties and $3.0 million with respects to breaches of covenants or other agreements. Additionally, subject to certain exceptions, the Company's indemnity obligations cannot exceed the amount that the Relief Parties actually pay to the Company for milestone and royalty payments. The parties have 30 days to implement the agreed actions and achieve closing under the APA, at which time all claims and counterclaims between the Company and the Relief Parties will be dismissed with prejudice.

Legal Proceedings

From time to time the Company is involved in litigation, claims, and other proceedings arising in the ordinary course of business. Litigation and other disputes are inherently unpredictable and subject to substantial uncertainties and unfavorable resolutions could occur.

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Share Subscription Facility Agreement - GEM

NeuroRx entered into a share subscription facility agreement ("GEM Agreement") with GEM Global Yield LLC SCS and GEM Yield Bahamas Limited (collectively, referred to as "GEM") with a three-year term which expired in October 2022. Subject to the successful listing of the shares of NeuroRx on an Exchange (any nationally recognized stock exchange or exchange platform in the world on which the Company will list its shares), GEM granted NeuroRx an option to require GEM to subscribe for shares from the Company for up to an aggregate value of approximately $95.6 million. The agreement also included certain provisions which would not meet the U.S. requirements to issue registered shares thus preventing its usage. If NeuroRx was listed or completed a private transaction which results in a change of control of the Company, NeuroRx would issue GEM a warrant and pay a commitment fee of $1.9 million. Absent a listing of NeuroRx shares or a private transaction with a change of control during the three-year term, NeuroRx would have no obligations under the agreement. The Merger contemplated by the Merger Agreement would not have resulted in a listing of NeuroRx shares or a change in control.

In November 2020, GEM introduced NeuroRx to BRPA. To resolve uncertainties around the application of the GEM Agreement post-Merger, NeuroRx and GEM agreed in March 2021 to issue a warrant to GEM and for the parties to use their good faith efforts to amend the GEM Agreement to meet U.S. requirements to issue registered shares. The warrant was not conditional upon any further events or completion of the Merger.

The warrant was issued March 28, 2021, for 3,329,812 shares of NeuroRx common stock at an exercise price of $3.19 per share (the "GEM Warrant") and the parties agreed that GEM would immediately partially exercise the warrant for the purchase of 1,496,216 shares ("Initial Exercised Shares") for $7.5 million. The GEM Warrant will be valid for a period of three years from the date NeuroRx's stock is listed for trading on a national securities exchange or consummation of a reverse merger transaction of the type contemplated by the Merger Agreement.

As of December 31, 2020, the Company recognized a contingent liability for its obligation to issue to GEM certain equity instruments at a discounted per share price. Specifically, as the amount was deemed probable and estimable at December 31, 2020, NeuroRx recorded a liability and settlement expense of $39.5 million to reflect the fair value of the expected GEM Warrant to be issued. On March 28, 2021, when the GEM Warrant was issued, the Company recorded an additional charge of $21.4 million to reflect the increased fair value of the GEM Warrant on its grant date. Upon issuance, the GEM Warrant was equity classified and was determined to be within the scope of ASC 718, Share-Based Payments ("ASC 718").

The GEM Warrants that were not exercised as of the Merger were modified and became Substitute Warrants on 1,833,596 shares, adjusted for the Merger as discussed in Note 11). These Substitute Warrants were liability classified (see Note 9). The changes in fair value of these Substitute Warrants were recognized as a gain or loss in the statement of operations until these Substitute Warrants were exercised in July 2021, at which time they were reclassified to additional paid-in capital.

On August 12, 2022, the Company received a demand for arbitration (the "Demand") from GEM. The Demand claims that the Company's subsidiary, NeuroRx, failed to satisfy its obligation to pay GEM a commitment fee in the amount of HK$15.0 million (approximately $1.9 million at current exchange rates) pursuant to the GEM Agreement. NeuroRx expects to vigorously defend its position that payment of the commitment fee is neither due nor owing under the terms of the Agreement.

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8. Equity

Common Stock

Pursuant to the terms of the Second Amended and Restated Certificate of Incorporation, the Company has authorized 500,000,000 shares of common stock with a par value of $0.001.

On March 8, 2023, the Company entered into a securities purchase agreement with certain accredited investors (the "Investors"), providing for the issuance and sale of 3,866,666 shares of the Company's common stock ("Common Stock") and warrants to purchase up to 3,866,666 shares of Common Stock (the "Investor Warrants") in a registered direct offering priced at-the-market under Nasdaq rules for a purchase price of $0.75 per share (the "Offering"). The Investors have agreed not to transfer the Common Stock for six months following the date hereof. The Investor Warrants have an exercise price of $0.75 per share, are initially exercisable beginning six months following the date of issuance (the "Initial Exercise Date") and expire 5 years from the Initial Exercise Date. The aggregate gross proceeds to the Company from the Offering were $2.9 million. The closing of the sale of these securities occurred on March 9, 2023. The securities are being issued pursuant to the Company's registration statement on Form S-3 filed with the SEC on June 9, 2022 (File No. 333-265492) and became effective on June 21, 2022. The net proceeds after deducting debt issuance costs from this transaction were $2.5 million.

On February 8, 2023, the Company entered into a letter agreement with H.C. Wainwright & Co., LLC. Although they are not acting as the placement agent with respect to this offering, they are to be paid a cash fee equal to 3.0% of the amount raised, or approximately $0.1 million, in this offering pursuant to such agreement.

The Company sold 7,824,727 shares of common stock during the three months ended March 31, 2022, generating net proceeds of $23.0 million.

Preferred Stock

Pursuant to the terms of the Second Amended and Restated Certificate of Incorporation, the Company has authorized 50,000,000 shares of preferred stock with a par value of $0.001. The Company has no shares of preferred stock outstanding.

Common Stock Warrants

Substitute Warrants

In connection with the Merger, each warrant of NeuroRx that was outstanding and unexercised immediately prior to the Effective Time (whether vested or unvested) was assumed by BRPA and converted into a warrant, based on the Exchange Ratio (of 3.16), that will continue to be governed by substantially the same terms and conditions, including vesting, as were applicable to the former warrant (the Substitute Warrants). As these Substitute Warrants meet the definition of a derivative as contemplated in ASC 815, the Substitute Warrants were recorded as derivative liabilities on the balance sheet and measured at fair value at inception (on the date of the Merger) and at each reporting date in accordance with ASC 820, *Fair Value Measurement*, with changes in fair value recognized in the statements of operations in the period of change.

The Company recognized a gain on the change in fair value of the Substitute Warrants for the three months ended March 31, 2023 and 2022, of less than $0.1 million and $0.1 million, respectively. Refer to Note 10 for further discussion of fair value measurement of the warrant liabilities.

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Assumed Public Warrants

Prior to the Merger, the Company had 3,450,000 Public Warrants outstanding. Each Public Warrant entitles the holder to purchase one share of Common Stock at an exercise price of $11.50 per share. The Public Warrants became exercisable at the Effective Time of the Merger and expire five years after the Effective Time or earlier upon their redemption or liquidation of the Company.

During the three months ended March 31, 2023 and 2022 no Public Warrants were exercised.

Assumed Placement Warrants

Prior to the Merger, the Company had outstanding 136,250 Placement Warrants (the "Placement Warrants"). The Placement Warrants are not indexed to the Company's common shares in the manner contemplated by ASC 815-40-15 because the holder of the instrument is not an input into the pricing of a fixed-for-fixed option on equity shares. The Company classifies the Placement Warrants as derivative liabilities in its Unaudited Condensed Consolidated Balance Sheet as of March 31, 2023. The Company measures the fair value of the Placement Warrants at the end of each reporting period and recognizes changes in the fair value from the prior period in the Company's statements of operations for the current period.

The Company recognized a gain on the change in fair value of the Placement Warrants for the three months ended March 31, 2023 and 2022 of less than $0.1 million and less than $0.1 million, respectively. Refer to Note 10 for discussion of fair value measurement of the warrant liabilities.

Investor Warrants

On March 8, 2023 the Company issued 3,866,666 Warrants which were classified in stockholder's equity. The measurement of fair value of the Warrants were determined utilizing a Black-Scholes model considering all relevant assumptions current at the date of issuance (i.e., share price of $0.72, exercise price of $0.75, term of five years, volatility of 123.6%, risk-free rate of 4.34%, and expected dividend rate of 0%). The grant date fair value of these Warrants was estimated to be $2.4 million on March 8, 2023 and is reflected within additional paid-in capital as of March 31, 2023.

The following table provides the activity for all warrants for the respective periods.

	Total Warrants	Weighted Average Remaining Term	Weighted Average Exercise Price	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2022	16,484,923	3.59	$ 6.49	—
Issued	3,866,666	0.94	0.14	—
Outstanding as of March 31, 2023	20,351,589	3.65	$ 5.40	$ —

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

9. Stock-Based Compensation

2016 Omnibus Incentive Plan

Prior to the Merger, NeuroRx maintained its 2016 Omnibus Incentive Plan (the "2016 Plan"), under which NeuroRx granted incentive stock options, restricted stock awards, other stock-based awards, or other cash-based awards to employees, directors, and non-employee consultants. The maximum aggregate shares of common stock that were subject to awards and issuable under the 2016 Plan was 3,472,000.

In connection with the Merger, each option of NeuroRx that was outstanding and unexercised immediately prior to the Effective Time (whether vested or unvested) was assumed by BRPA and converted into an option to acquire an adjusted number of shares of Common Stock at an adjusted exercise price per share (the "Substitute Options"), based on the Exchange Ratio (of 3.16).

Upon the closing of the Merger, the outstanding and unexercised NeuroRx stock options became options to purchase an aggregate 2,895,423 shares of the Company's Common Stock at an average exercise price of $5.10 per share.

2021 Omnibus Incentive Plan

As of March 31, 2023, 6,713,608 shares of Common Stock are authorized for issuance pursuant to awards under the 2021 Plan. As of January 1, 2023, 664,430 shares were added to the 2021 Plan under an evergreen feature that automatically increases the reserve with additional shares of Common Stock for future issuance under the Incentive Plan each calendar year, beginning January 1, 2022 and ending on and including January 1, 2031, equal to the lesser of (A) 1% of the shares of Common Stock outstanding on the final day of the immediately preceding calendar year or (B) a smaller number of shares determined by the Board. As of March 31, 2023, 5,749,394 shares have been awarded and 964,214 shares remain available for issuance under the 2021 Plan. The 2021 Plan permits the granting of incentive stock options, restricted stock awards, other stock-based award or other cash-based awards to employees, directors, and non-employee consultants.

Option Awards

The fair value of each employee and non-employee stock option grant is estimated on the date of grant using the Black-Scholes option-pricing model. The Company is a public company and has limited company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the limited company-specific historical volatility and implied volatility as well as historical volatility of a publicly traded set of peer companies. The expected term of the Company's stock options for employees has been determined utilizing the "simplified" method for awards. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve. Expected dividend yield is zero based on the fact that the Company has never paid cash dividends and does not expect to pay any cash dividends in the foreseeable future. Additionally, certain options granted contain terms that require all unvested options to immediately vest a) upon the approval of a New Drug Application (NDA) by the FDA for NRX-101, or b) immediately preceding a change in control of the Company, whichever occurs first.

The grant date fair value of employee and non-employee stock option awards is determined using the Black Scholes option-pricing model. The Company did not grant any stock options during the three months ended March 31, 2023.

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The following assumptions were used for the year ended December 31, 2022:

	December 31, 2022
Exercise price	$0.51 - $3.10
Risk-free rate of interest	1.8% - 4.36%
Expected term (years)	5.3 - 6.5
Expected stock price volatility	94.9% - 147.8%
Dividend yield	—

The following table summarizes the Company's employee and non-employee stock option activity under the Plan for the following periods:

	Number of shares	Weighted average exercise price	Weighted average remaining contractual life (in years)	Aggregate intrinsic value (in thousands)
Outstanding as of December 31, 2022	2,548,849	$ 3.32	8.4	$ 618
Outstanding as of March 31, 2023	2,548,849	$ 3.32	8.1	$ 124
Options vested and exercisable as of March 31, 2023	1,023,018	$ 4.87	6.5	$ 75

The weighted average grant date fair value per share for employee stock and non-employee option grants during the three months ended March 31, 2022 was $2.27. At March 31, 2023, the total unrecognized compensation related to unvested employee and non-employee stock option awards granted, was $1.6 million, of which the Company expects to recognize over a weighted-average period of approximately 1.2 years.

The following table summarizes the Company's recognition of stock-based compensation for the following periods (in thousands):

	Three months ended March 31,	
	2023	2022
Stock-based compensation expense		
General and administrative	$ 591	$ 1,116
Research and development	104	218
Total stock-based compensation expense	**$ 695**	**$ 1,334**

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Restricted Stock Awards

The following table presents the Company's Restricted Stock Activity:

	Awards	Weighted Average Grant Date Fair Value
Balance as of December 31, 2022	1,000,000	$ 0.57
Unvested Balance as of March 31, 2023	1,000,000	$ 0.57

As of March 31, 2023, total unrecognized compensation expense related to unvested RSAs granted was approximately $0.4 million, which is expected to be recognized over a weighted-average period of approximately 2.3 years.

Stock-based compensation expense related to RSAs was less than $0.1 million during the three months ended March 31, 2023.

10. Fair Value Measurements

Fair value measurements discussed herein are based upon certain market assumptions and pertinent information available to management as of and during the three months ended March 31, 2023 and year ended December 31, 2022. The carrying amount of accounts payable approximated fair value as they are short term in nature. The fair value of warrants issued for services are estimated based on the Black-Scholes model during the three months ended March 31, 2023 and year ended December 31, 2022. The fair value of the convertible note payable was estimated utilizing a Monte Carlo simulation during the three months ended March 31, 2023 and the year ended December 31, 2022.

Fair Value on a Recurring Basis

The Company follows the guidance in ASC 820 for its financial assets and liabilities that are re-measured and reported at fair value at each reporting period, and non-financial assets and liabilities that are re-measured and reported at fair value at least annually. The estimated fair value of the money market account represents a Level 1 measurement. The estimated fair value of the warrant liabilities and Earnout Cash contingent consideration represent Level 3 measurements. The following table presents information about the Company's assets and liabilities that are measured at fair value on a recurring basis at March 31, 2023 and year ended December 31, 2022, and indicates the fair value hierarchy of the valuation inputs the Company utilized to determine such fair value (in thousands):

Description	Level	March 31 2023	December 31 2022
		(Unaudited)	
Assets:			
Money Market Account	1	$ 13,902	$ 15,249
Liabilities:			
Warrant liabilities (Note 10)	3	$ 25	$ 37
Convertible note payable (Note 6)	3	$ 12,189	$ 10,525

NRX PHARMACEUTICALS, INC.

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Convertible Note Payable

The significant inputs used in the Monte Carlo simulation to measure the convertible note liability that is categorized within Level 3 of the fair value hierarchy are as follows:

	March 31, 2023
Stock price on valuation date	$ 0.66
Time to expiration	1.09
Note market interest rate	17.1%
Equity volatility	125.0%
Volume volatility	420.0%
Risk-free rate	4.58%
Probability of default	14.6%

The following table sets forth a summary of the changes in the fair value of the Company's convertible note payable categorized within Level 3 of the fair value hierarchy (in thousands):

	March 31, 2023 (Unaudited)	December 31, 2022
Par value of the Note	$ 11,020	$ 11,020
Debt discount	(497)	(1,000)
Carrying value of the Note before current period change in fair value	10,523	10,020
Fair value adjustment through earnings	1,772	505
Fair value adjustment through accumulated other comprehensive income	(106)	—
Total carrying value of Note	$ 12,189	$ 10,525
Convertible note payable - current portion	$ 12,189	$ 7,703
Convertible note payable, net of current portion	$ —	$ 2,822

Warrant liabilities

The Company utilizes a Black-Scholes model approach to value the Placement Warrants and Substitute Warrants at each reporting period, with changes in fair value recognized in the statement of operations. The estimated fair value of the warrant liabilities is determined using Level 3 inputs. Inherent in a Black Scholes options pricing model are assumptions related to expected share-price volatility, expected life, risk-free interest rate and dividend yield. The Company estimates the volatility of its common stock based on historical and peer company volatility that matches the expected remaining life of the warrants. The risk-free interest rate is based on the U.S. Treasury zero-coupon yield curve on the grant date for a maturity similar to the expected remaining life of the warrants. The expected life of the warrants is assumed to be equivalent to their remaining contractual term. The dividend rate is based on the historical rate, which the Company anticipates remaining at zero.

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The significant inputs used in the Black-Scholes model to measure the warrant liabilities that are categorized within Level 3 of the fair value hierarchy are as follows:

	March 31, 2023
Stock price on valuation date	$ 0.66
Exercise price per share	$ 3.48 - 11.50
Expected life	0.02 - 3.15
Volatility	55.0 - 123.6%
Risk-free rate	3.79 - 4.77%
Dividend yield	0.00%
Fair value of warrants	$ 0.00 - 0.19

A reconciliation of warrant liabilities is included below (in thousands):

	March 31, 2023
Balance as of December 31, 2022	$ 37
Gain upon re-measurement	(12)
Balance as of March 31, 2023	$ 25

11. Income Taxes

The Company recorded no provision or benefit for income tax expense for the three months ended March 31, 2023 and 2022, respectively.

For all periods presented, the pretax losses incurred by the Company received no corresponding tax benefit because the Company concluded that it is more likely than not that the Company will be unable to realize the value of any resulting deferred tax assets. The Company will continue to assess its position in future periods to determine if it is appropriate to reduce a portion of its valuation allowance in the future.

The Company has no open tax audits with any taxing authority as of March 31, 2023.

12. Related Party Transactions

The Company licenses patents that are owned by Glytech, LLC (“Glytech”), pursuant to a license agreement (the “Glytech Agreement”). Glytech is owned by a co-founder and former director of the Company. The Glytech Agreement requires that the Company pay Glytech for ongoing scientific support and also reimburse Glytech for expenses of obtaining and maintaining patents that are licensed to NRx Pharmaceuticals. During the three months ended March 31, 2023 and 2022, the Company paid Glytech $0.1 million and $0.1 million, respectively, for continuing technology support services and reimbursed expenses. These support services are ongoing.

The Fourth Amendment to the Glytech Agreement, effective as of December 31, 2020, includes an equity value-triggered transfer of Excluded Technology from Glytech to NRx Pharmaceuticals. The Excluded Technology is defined in the Glytech Agreement as any technology, and any know-how related thereto, covered in the licensed patents that do not recite either D-cycloserine or lurasidone individually or jointly. This definition would cover pharmaceutical formulations, including some that NRx Pharmaceuticals considers “pipeline” or “future product” opportunities, that contain a combination of pharmaceutical components different from those contained in NRX-100 and NRX-101. On November 6, 2022 the Glytech Agreement was amended whereby Glytech agreed to transfer and assign the remainder of the Licensed Technology and the Excluded Technology to NRx Pharmaceuticals for no additional consideration at any time upon receipt of written notice from the Company if, on or prior to January 31, 2023, (i) the value of the Glytech equity holdings in NRx

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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Pharmaceuticals (the "Glytech Equity") has an aggregate liquidity value of at least $50 million for twenty (20) consecutive trading days immediately preceding any given date and (ii) there are no legal or contractual restrictions on selling all of the securities represented by the Glytech Equity then applicable to Glytech (or reasonably foreseeable to be applicable to Glytech within the following twenty trading days). The Glytech Agreement was amended to extend the period to meet these conditions until May 15, 2023. The Company and Glytech may seek to extend this period beyond May 15, 2023 if additional time is needed to consummate a transaction.

The Chief Scientist of the Company, Dr. Jonathan Javitt, is a major shareholder in the Company and a member of the Board of Directors. Therefore, his services are deemed to be a related party transaction. He served the Company on a full-time basis as CEO under an employment agreement with the Company until March 8, 2022 and currently serves under a Consulting Agreement with the Company as Chief Scientist thereafter and received compensation of $0.3 million and $0.4 million during the three months ended March 31, 2023 and 2022, respectively.

On March 29, 2023, the Consulting Agreement dated March 8, 2022 (the "Javitt Consulting Agreement") between the Company and Dr. Jonathan Javitt was amended to extend the term of the Agreement until March 8, 2024 with automatic annual renewals thereafter unless one party or the other provides notice of non-renewal. The amendment also provided for payment at the rate of $0.6 million per year, payable monthly (i.e., less than $0.1 million per month), and a performance-based annual bonus with a minimum target of $0.3 million, at the discretion of the Board and upon satisfactory performance of the services. The annual bonus for 2023, if any, is payable in March 2024, will be pro-rated from the start of the extension period and is subject to Dr. Javitt's continued engagement by the Company.

The amendment also provides, subject to the approval of the Board of Directors, for a grant of 500,000 shares of restricted stock of the Company under the Company's 2021 Omnibus Incentive Plan. The restrictions are performance based, and half of the restricted shares (250,000) shall have the restrictions removed on the New Drug Application Date (as defined below) and the remaining half (250,000) will have the restrictions removed on the New Drug Approval Date (as defined below). As of March 31, 2023, the Board of Directors have not approved the grant of restricted stock.

The term "New Drug Application Date" means the date upon which the Food and Drug Administration ("FDA") files the Company's new drug application for the Antidepressant Drug Regimen (as defined below) for review. The term "New Drug Approval Date" means date upon which the FDA has both approved the Company's Antidepressant Drug Regimen and listed the Company's Antidepressant Drug Regimen in the FDA's "Orange Book". The term "Antidepressant Drug Regimen" means NRX-101, a proprietary fixed-dose combination capsule of d-cycloserine and Lurasidone, administered for sequential weeks of daily oral treatment following patient stabilization using a single infusion of NRX-100 (ketamine) or another standard of care therapy.

Zachary Javitt is the son of Dr. Jonathan Javitt. Zachary Javitt provides services related to website, IT, and marketing support under the supervision of the Company's CEO and the Company's Senior Director of Global Communications, who are responsible for assuring that the services are provided on financial terms that are at market. The Company paid this family member a total of less than $0.1 million and $0.1 million during the three months ended March 31, 2023 and 2022, respectively. These services are ongoing.

In addition, the Company paid PillTracker for digital health product development required to track the use of Aviptadil in clinical trials. Zachary Javitt and Jonathan Javitt are the chief executive officer and board chairman, respectively, of PillTracker. PillTracker agreements and transactions are submitted to the General Counsel of the Company and the Chair of the Audit Committee for approval in accordance with the terms of the Company's Related Person Transactions Policy. The Master Service Agreement dated April 1, 2020 ("MSA"), and all work orders thereunder, have been suspended by mutual agreement pending the Company's re-evaluation of its respiratory franchise. NRx Pharmaceuticals paid PillTracker $0.2 million during the three months ended March 31, 2022.

NRX PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Included in accounts payable were less than $0.1 million and less than $0.1 million due to the above related parties as of March 31, 2023 and December 31, 2022, respectively.

13. Subsequent Events

The Company evaluated subsequent events through the date of issuance of the unaudited condensed consolidated financial statements included herein. There have been no subsequent events that occurred during such period that would require disclosure in this Form 10-Q or would be required to be recognized in the unaudited condensed consolidated financial statements as of March 31, 2023 and for the three months ended March 31, 2023.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis of NRx Pharmaceuticals' financial condition and plan of operations together with NRx Pharmaceuticals' unaudited, condensed consolidated financial statements and the related notes appearing elsewhere herein. In addition to historical information, this discussion and analysis contains forward looking statements that involve risks, uncertainties and assumptions. NRx Pharmaceuticals' actual results may differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below, and those discussed in the section entitled "Risk Factors" included elsewhere herein.

Overview

On May 24, 2021, Big Rock Partners Acquisition Group ("BRPA"), a special purpose acquisition company, consummated the Agreement and Plan of Merger (as amended, the "Merger Agreement") with NeuroRx, Inc., a Delaware corporation ("NeuroRx"), and Big Rock Merger Corp., a Delaware corporation and wholly owned, direct subsidiary of BRPA ("Merger Sub"). Pursuant to the Merger Agreement, on May 24, 2021 (the "Closing Date"), which has been accounted for as a reverse recapitalization, Merger Sub was merged with and into NeuroRx, with NeuroRx surviving the merger (the "Merger" and, together with the other transactions contemplated by the Merger Agreement, the "Business Combination"). On the Closing Date, BRPA changed its name to NRX Pharmaceuticals, Inc. ("NRx Pharmaceuticals" or the "Company").

NRx Pharmaceuticals is a clinical stage pharmaceutical company that is developing, through its wholly owned operating subsidiary, NeuroRx, NRX-100 and NRX-101, the first oral therapeutic for the treatment of Bipolar Depression in patients with Acute Suicidal Ideation and Behavior (ASIB) and Sub-Acute Suicidal Ideation and Behavior ("SSIB"). NRX-100 and NRX-101 were developed based upon 30 years of basic science and clinical expertise contributed by Dr. Daniel Javitt, MD, PhD, related to the role of the brain's N-methyl-D-aspartate ("NMDA") receptor in regulating human thought processes in general and in regulating depression and suicidality. The NRX-100 and NRX-101 investigational therapy begins with a single dose of ketamine (NRX-100), a Food & Drug Administration ("FDA") approved anesthetic, followed by approximately six weeks of daily oral NRX-101. NRX-101 is being developed as a rapid-onset and sustained treatment for bipolar depression with ASIB and SSIB. NRX-101 combines d-Cycloserine, a NMDA receptor modulator, and lurasidone, a 5-HT2a receptor antagonist.

NRX-101 has been awarded Fast Track designation, Breakthrough Therapy designation, a Biomarker Letter of Support, and a Special Protocol Agreement by the FDA. Peer-reviewed and published results from Phase II clinical studies demonstrate a significant decline and stabilization in symptoms of depression and suicidality following administration of DCS in combination with antidepressants. Findings from one of these studies found that bipolar patients who were already receiving a 5-HT2a antagonist demonstrated more than a 50% reduction in symptoms of depression and a 75% reduction in suicidal ideation when ketamine and DCS were added to their treatment regimen. Side effects for patients in a Phase 2a combination study of DCS and 5HT2a included mild sedation, headaches and hypomania. Breakthrough Therapy designation was awarded based on data from the STABIL-B study (NCT02974010) that demonstrated a statistically significant advantage of NRX-101 vs. lurasidone (the active ingredient used in the market leading branded bipolar depression agent) in maintaining remission from depression and suicidality following a single stabilizing dose of ketamine.

In March 2022, NRx Pharmaceuticals announced a primary focus on its psychiatry franchise and the late-stage development of NRX-101 for the treatment of bipolar depression in patients with suicidality. NRX-101 is a fixed dose combination of D-cycloserine, an NMDA antagonist, and lurasidone, a 5-HT_{2A} atypical antipsychotic and antidepressant, for the maintenance of remission from severe bipolar depression following initial stabilization with ketamine. The previously undiscovered synergy between these two drug classes in the treatment of CNS disorders, combined with the efficacy of D-cycloserine in the treatment of depression and PTSD, is the subject of 47 issued patents and more than 43 pending patents owned by or licensed to NRx Pharmaceuticals.

NRX-101 in Severe Bipolar Depression in Patients with Acute Suicidal Ideation and Behavior (ASIB) After Initial Stabilization with ketamine

- In 2017, NRX-101 received an investigational new drug (IND) clearance by the U.S. Food and Drug Administration (FDA) and a Phase 2b/3 clinical trial commenced for bipolar depression with ASIB. Later that year, the FDA granted NRX-101 a Fast Track designation for the same indication.

- In 2018, the FDA provided a Letter of Support to the Company encouraging the development of Glutamine+Glutamate (Glx) as a pharmacodynamic biomarker for depression. The letter referenced published and unpublished data demonstrating a significant association between clinical symptoms of depression and levels of brain Glx.

- In the STABIL-B Phase 2 trial, the Phase 2 portion of the Phase 2b/3 trial, patients with bipolar depression and ASIB received either NRX-101 or lurasidone after an intravenous infusion of NRX-100 (ketamine). The proof-of-concept data presented at the American Congress of Neuropsychopharmacology in 2018 demonstrated with statistical significance that NRX-101 treated patients experienced lower depression scores and did not relapse.

- Based on STABIL-B findings, the FDA granted NRX-101 Breakthrough Therapy Designation and a Special Protocol Agreement ("SPA") for bipolar depression in patients with ASIB, which affects ~150K-180K patients per year in the U.S. The Breakthrough Therapy Designation allows for an expedited rolling submission of a new drug application ("NDA") for investigational drugs that have demonstrated substantial improvement over existing approved therapies, and the SPA allows for a single registrational trial of NRX-101 in severe bipolar depression in patients with ASIB after stabilization with ketamine, using a protocol similar to the STABIL-B trial with a patient population of less than 100.

- NRx Pharmaceuticals announced that it has transferred Phase 3 commercial drug manufacturing processes to the U.S. and released Phase 3 drug manufactured via the expected commercial-stage processes. NRx Pharmaceuticals has submitted its manufacturing file to the FDA. This investigational drug manufactured according to these new processes will be used in the upcoming Phase 3 trial.

- We were initiating a new registrational study of NRX-101 for the treatment of severe bipolar depression with ASIB, a potentially lethal condition that currently takes the lives of thousands of Americans each year, after initial stabilization with NRX-100 (described below). We intend to use newly manufactured material that was manufactured using the expected commercial process. On January 3, 2023, the Company announced that its first clinical trial sites had been contracted for this study, but patient recruiting has not begun.

- On February 14, 2023, the Company announced its receipt of the written minutes of a Type B meeting held with the FDA on January 11, 2023, to outline the clinical & preclinical requirements for registration of NRX-101. Overall, the FDA suggested expanding the safety data base of NRX-101 to allow for chronic/intermittent use of NRX-101, as well as a broadening of the addressable population of the indication (under the SPA or otherwise) to patients with severe bipolar depression and recent acute suicidality regardless of how the initial stabilization was accomplished could represent a more straightforward development program. This broader indication would enable the Company to potentially demonstrate the use of NRX-101 to maintain stabilization from suicidality in patients stabilized either with ketamine (NRX-100) or with other standard of care therapeutic approaches. FDA encouraged the Company to request a Breakthrough Therapy Planning Meeting for NRX-101, which we intent to do in the next few months.

NRX-101 Indication – Bipolar Depression in Patients with Sub-acute Suicidal Ideation and Behavior (SSIB)

- A Phase 2 double-blind study completed in 2018 demonstrated the ability of NRX-101 to improve depression and suicidality over 6 weeks when taken twice daily over lurasidone alone after an initial stabilization with ketamine.

The current study involving patients with bipolar depression and sub-acute suicidality (not requiring hospitalization) does not include the use of ketamine; all patients are being treated in an outpatient setting.

Consolidated NRX-101 Program in Suicidal Treatment-Resistant Bipolar Depression

Based on the comments and guidance from the FDA in its recent Type B meeting regarding the registrational Acute Suicidality trial and a potentially broader indication, as well as the guidance it received from the DSMB regarding the ongoing Phase IIb/3 clinical study of NRX-101 for the treatment of severe bipolar depression in patients with SSIB, the Company is evaluating changes to its registrational program for NRX-101 and will seek to consolidate patients originally expected to enroll in the ASIB study into the currently enrolling Phase IIb/3 trial. This would potentially allow registration of NRX-101 for Suicidal Treatment-Resistant Bipolar Depression, regardless of the mechanism of stabilization. With the FDA's guidance to enroll patients for the acute (SPA) study in the outpatient setting only after stabilization, the design of this trial has effectively converged with the currently enrolling phase IIb/3 trial; patients within both groups are deemed to have treatment resistant bipolar depression with suicidality. This broader indication may also offer significant advantages in commercialization, while negating the need for a separate NDA for ketamine in Suicidal stabilization.

- The US population of patients with Suicidal Treatment Resistant Bipolar Depression is estimated to be between 700,000 and 1,000,000 people.

- We expect top-line data from this trial in the fourth quarter of 2023.

NRX-101 Indication – Post Traumatic Stress Disorder

- NRx plans to commence a Phase 2 clinical trial of NRX-101 in PTSD in the second half of 2023.

- Depression in PTSD may be driven by pathways that are similar to those that drive depression in other conditions (NMDA and 5-HT2A). Additionally, approximately 10% of patients with PTSD may experience suicidality, especially those with severe PTSD.

- In a preclinical PTSD study, D-cycloserine, a component of NRX-101, demonstrated the ability to extinguish recurring images of traumatic events, also known as fear memory, in a validated WKY model of PTSD.

Since inception, NRx Pharmaceuticals has incurred significant operating losses. For the three months ended March 31, 2023 and 2022, NRx Pharmaceuticals' net loss was $11.0 million and $13.4 million, respectively. As of March 31, 2023, NRx Pharmaceuticals had an accumulated deficit of $234.0 million.

Components of Results of Operations

Operating expenses

Research and development expenses

NRx Pharmaceuticals' research and development expenses consist primarily of costs associated with NRx Pharmaceuticals' clinical trials, salaries, payroll taxes, employee benefits, and equity-based compensation charges for those individuals involved in ongoing research and development efforts. Research and development costs are expensed as incurred. Advance payments for goods and services that will be used in future research and development activities are expensed when the activity has been performed or when the goods have been received.

General and administrative expenses

General and administrative expenses consist primarily of salaries, stock-based compensation, consultant fees, and professional fees for legal and accounting services.

Results of operations for the three months ended March 31, 2023 and 2022

The following table sets forth NRx Pharmaceuticals' selected statements of operations data for the following periods (in thousands):

	Three Months Ended March 31,		Change
	2023	2022	Dollars
	(Unaudited)		
Operating expenses:			
Research and development	$ 3,650	$ 5,483	$ (1,833)
General and administrative	5,785	10,222	(4,437)
Total operating expenses	9,435	15,705	(6,270)
Loss from operations	$ (9,435)	$ (15,705)	$ 6,270
Other (income) expenses:			
Interest income	$ (156)	$ —	$ (156)
Interest expense	—	3	(3)
Change in fair value of convertible note payable	1,772	—	1,772
Change in fair value of warrant liabilities	(12)	(157)	145
Change in fair value of Earnout Cash liability	—	(2,103)	2,103
Total other (income) expenses	1,604	(2,257)	3,861
Net loss	$ (11,039)	$ (13,448)	$ 2,409

Operating expenses

Research and development expenses

For the three months ended March 31, 2023, NRx Pharmaceuticals recorded $3.7 million of research and development expenses compared to $5.5 million for the year ended March 31, 2022. The decrease of $1.8 million is related primarily to a decrease of $1.8 million in clinical trials and development expenses related to ZYESAMI. The $3.7 million and $5.5 million of research and development expenses for the three months ended March 31, 2023 and 2022, respectively, include $0.1 million and $0.2 million, respectively, of non-cash stock-based compensation.

General and administrative expenses

For the three months ended March 31, 2023, NRx Pharmaceuticals recorded $5.8 million of general and administrative expenses compared to $10.2 million for the three months ended March 31, 2022. The decrease of $4.4 million was primarily, related to a decrease of $3.9 million in legal, professional and accounting fees, $0.6 million in insurance expenses, $0.5 million in stock-based compensation expense, partially offset by $0.3 million in employee expenses and $0.3 million in consultant fees. The $5.8 million and $10.2 million of general and administrative expenses for the three months ended March 31, 2023 and 2022, respectively, include $0.6 million and $1.1 million, respectively, of non-cash stock-based compensation.

Other (income) expenses

Interest income

For the three months ended March 31, 2023, NRx Pharmaceuticals recorded $0.2 million of interest income earned on the Company's money market account.

Change in fair value of convertible note payable

For the three months ended March 31, 2023, NRx Pharmaceuticals recorded $1.8 million related to the change in fair value of the convertible note payable which is accounted for under the fair value option.

Change in fair value of warrant liabilities

For the three months ended March 31, 2023, NRx Pharmaceuticals recorded a gain of less than $0.1 million related to the change in fair value of the warrant liabilities compared to a gain of $0.2 million for the three months ended March 31, 2022. The decrease of $0.1 million related to the decrease in the fair value of certain Substitute Warrants and the Placement Warrants assumed pursuant to the Merger Agreement.

Change in fair value of Earnout Cash liability

For the three months ended March 31, 2023, NRx Pharmaceuticals recorded no change in fair value of the Earnout Cash liability compared to a gain of $2.1 million for the three months ended March 31, 2022. The Earnout Cash milestones were not achieved by December 31, 2022 and therefore the Earnout Cash liability expired. The gain for the three months ended March 31, 2022 related to the decrease in fair value of the Earnout Cash liability.

Liquidity and Capital Resources

The Company has generated no revenues, has incurred operating losses since inception, and expects to continue to incur significant operating losses for the foreseeable future and may never become profitable. Until such time as the Company is able to establish a revenue stream from the sale of its therapeutic products, NRx Pharmaceuticals is dependent upon obtaining necessary equity and/or debt financing to continue operations. NRx Pharmaceuticals cannot make any assurances that sales of NRX-101 will commence in the near term or that additional financings will be available to it and, if available, on acceptable terms or at all. This could negatively impact NRx Pharmaceuticals' business and operations and could also lead to the reduction of NRx Pharmaceuticals' operations.

On March 8, 2023, NRx Pharmaceuticals entered into a securities purchase agreement (the “Securities Purchase Agreement”) with accredited investors (the “Investors”), providing for the issuance and sale of 3,866,666 shares of the Company’s common stock (“Common Stock”) and warrants to purchase up to 3,866,666 shares of Common Stock (the “Investor Warrants”) in a registered direct offering priced at-the-market under Nasdaq rules for a purchase price of $0.75 per share (the “Offering”). The Investors have agreed not to transfer the Common Stock for six months following the date hereof. The Investor Warrants will have an exercise price of $0.75 per share, will be initially exercisable beginning six months following the date of issuance (the “Initial Exercise Date”) and will expire 5 years from the Initial Exercise Date. The aggregate gross proceeds to the Company from the Offering are expected to be approximately $2.9 million. The Company intends to use the net proceeds from such offering for working capital and general corporate purposes. The closing of the sale of these securities occurred on March 9, 2023.

NRx Pharmaceuticals believes that it does not currently have sufficient funds and, if necessary, the ability to reduce expenditures, to support operations through at least the next twelve months from the date hereof. NRx Pharmaceuticals is dependent upon obtaining necessary equity and/or debt financing to continue operating. NRx Pharmaceuticals cannot make any assurances that additional financing will be available to it and, if available, on acceptable terms or at all. This could negatively affect the Company’s business and operations and could also lead to the reduction of the Company's operations.

The following table presents selected financial information and statistics for each of the periods shown below:

	March 31, 2023	December 31, 2022
Balance Sheet Data:	**(Unaudited)**	
Cash	$ 16,506	$ 20,054
Total assets	21,780	25,816
Convertible note payable	12,189	10,525
Total liabilities	22,064	18,407
Total stockholders' (deficit) equity	(284)	7,409

	March 31,	
	2023	2022
	(Unaudited)	
Statement of Cash Flow Data:		
Net cash used in operating activities	(6,089)	(10,380)
Net cash used in investing activities	(4)	(3)
Net cash provided by financing activities	2,545	22,980
Net (decrease) increase in cash	$ (3,548)	$ 12,597

Operating activities

During the three months ended March 31, 2023, operating activities used $6.1 million of cash, primarily resulting from a net loss of $11.0 million, reduced by (a) net non-cash losses of $2.5 million, including $1.8 million in change in fair value of convertible promissory note and $0.7 million of stock-based compensation, and (b) changes in operating assets and liabilities of $2.5 million.

During the three months ended March 31, 2022, operating activities used $10.4 million of cash, primarily resulting from a net loss of $13.4 million, increased by net non-cash gains of $1.0 million, including $2.1 million of gain from the change in fair value of earn out liability and $0.2 million of gain from the changes in fair value of warrant liability, partially offset by $1.3 million of stock-based compensation expense, and an increase in net operating assets of $4.0 million.

Financing activities

During the three months ended March 31, 2023, financing activities provided $2.5 million of cash resulting from $2.5 million in proceeds from issuance of common stock and warrants issued in a private placement, net of issuance costs.

During the three months ended March 31, 2022, financing activities provided $23.0 million of cash resulting from the net proceeds received by the Company from the issuance of common stock and preferred investment options in a private placement.

Contractual Obligations and Commitments

See Note 6, Debt, and Note 7, Commitments and Contingencies, of the notes to the Company’s unaudited condensed consolidated financial statements as of and for the three months ended March 31, 2023 included elsewhere in this report for further discussion of the Company’s commitments and contingencies.

Milestone Payments

Pursuant to the legal settlement with Sarah Herzog Memorial Hospital Ezrat Nashim (“SHMH”) in September 2018, which included the license of intellectual property rights from SHMH, an ongoing royalty of 1% to 2.5% of NRX-101 gross sales is due to SHMH, together with milestone payments of $0.3 million, upon completion of phase 3 trials and commercial sale of NRX-101. The milestone payments for developmental and commercial milestones range from $0.1 million to $0.8 million. Annual maintenance fees are up to $0.2 million.

Off-Balance Sheet Arrangements

The Company is not party to any off-balance sheet transactions. The Company has no guarantees or obligations other than those which arise out of normal business operations.

Critical Accounting Policies and Significant Judgments and Estimates

The Company's management's discussion and analysis of its financial condition and results of operations is based on its financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires NRx Pharmaceuticals to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities as of the date of the balance sheet and the reported amounts of expenses during the reporting period. In accordance with GAAP, NRx Pharmaceuticals evaluates its estimates and judgments on an ongoing basis. The most significant estimates relate to the Earnout Cash Liability, stock-based compensation, and the valuation of warrants. NRx Pharmaceuticals bases its estimates and assumptions on current facts, historical experiences, and various other factors that NRx Pharmaceuticals believes are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

NRx Pharmaceuticals defines its critical accounting policies as those accounting principles that require it to make subjective estimates and judgments about matters that are uncertain and are likely to have a material impact on its financial condition and results of operations, as well as the specific manner in which NRx Pharmaceuticals applies those principles. While its significant accounting policies are more fully described in Note 3 to its financial statements, NRx Pharmaceuticals believes the following are the critical accounting policies used in the preparation of its financial statements that require significant estimates and judgments.

Stock-based compensation

We measure stock option awards granted to employees and directors based on the fair value of the award on the date of the grant and recognize compensation expense of those awards over the requisite service period, which is generally the vesting period of the respective award. For restricted stock awards, the grant date fair value is the fair market value per share as of the grant date based on the closing trading price for the Company's stock. The straight-line method of expense recognition is applied to awards with service-only conditions. We account for forfeitures as they occur.

We estimate the fair value of each stock option award using the Black-Scholes option-pricing model, which uses as inputs the fair value of our common stock and assumptions we make for the volatility of our common stock, the expected term of our stock-based awards, the risk-free interest rate for a period that approximates the expected term of our stock-based awards, and our expected dividend yield. Therefore, we estimate our expected volatility based on the implied volatility of publicly traded warrants on our common stock and historical volatility of a set of our publicly traded peer companies. We estimate the expected term of our options using the "simplified" method for awards that qualify as "plain-vanilla" options. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. Expected dividend yield is based on the fact that we have never paid cash dividends on common stock and do not expect to pay any cash dividends in the foreseeable future.

The assumptions used in determining the fair value of stock-based awards represent reasonable estimates, but the estimates involve inherent uncertainties and the application of our judgment. As a result, if factors change and we use significantly different assumptions or estimates, our stock-based compensation expense could be materially different in the future.

Warrant liabilities

We account for warrants as either equity-classified or liability-classified instruments based on an assessment of the warrant's specific terms and applicable authoritative guidance in ASC 480, Distinguishing Liabilities from Equity ("ASC 480") and ASC 815, Derivatives and Hedging ("ASC 815"). The assessment considers whether the warrants are freestanding financial instruments pursuant to ASC 480, meet the definition of a liability pursuant to ASC 480, and whether

the warrants meet all of the requirements for equity classification under ASC 815, including whether the warrants are indexed to the Company's own common stock and whether the warrant holders could potentially require "net cash settlement" in a circumstance outside of the Company's control, among other conditions for equity classification. This assessment, which requires the use of professional judgment, is conducted at the time of warrant issuance and as of each subsequent quarterly period end date while the warrants are outstanding.

For issued or modified warrants that meet all of the criteria for equity classification, the warrants are required to be recorded as a component of additional paid-in capital at the time of issuance. For issued or modified warrants that do not meet all the criteria for equity classification, the warrants are required to be recorded at their initial fair value on the date of issuance, or date of modification, and each balance sheet date thereafter. Changes in the estimated fair value of the warrants are recognized as a non-cash gain or loss on the statements of operations. The fair value of the Placement Warrants was estimated using a Black Scholes valuation approach and the fair value of the Substitute Warrants was estimated using a modified Black Scholes valuation approach which applies a probability factor based on the Earnout Cash Milestone and Earnout Shares Milestone probabilities of achievement at each reporting period.

Convertible note payable

As permitted under Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 825, Financial Instruments ("ASC 825"), the Company elects to account for its convertible promissory note, which meets the required criteria, at fair value at inception and at each subsequent reporting date. Subsequent changes in fair value are recorded as a component of non-operating loss in the consolidated statements of operations. As a result of electing the fair value option, direct costs and fees related to the convertible promissory notes are expensed as incurred.

The Company estimates the fair value of the convertible note payable using a Monte Carlo simulation model, which uses as inputs the fair value of our common stock and estimates for the equity volatility and volume volatility of our common stock, the time to expiration of the convertible note, the risk-free interest rate for a period that approximates the time to expiration, and probability of default. Therefore, we estimate our expected future volatility based on the actual volatility of our common stock and historical volatility of our common stock utilizing a lookback period consistent with the time to expiration. The time to expiration is based on the contractual maturity date, giving consideration to the mandatory and potential accelerated redemptions beginning six months from the issuance date. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of measurement for time periods approximately equal to the time to expiration. Probability of default is estimated using Bloomberg's Default Risk function which uses our financial information to calculate a default risk specific to the Company.

The assumptions used in determining the fair value of the convertible note payable represent reasonable estimates, but the estimates involve inherent uncertainties and the application of our judgment. As a result, if factors change and we use significantly different assumptions or estimates, the change in fair value of the convertible note payable recorded to other (income) expense could be materially different in the future.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

As a smaller reporting company, we are not required to provide the information required by this Item.

Item 4. Controls and Procedures

(a) Evaluation of Disclosure Controls and Procedures

We maintain "disclosure controls and procedures," as such term is defined under Rule 13a-15(e) promulgated under the Exchange Act, designed to ensure that information required to be disclosed in our reports filed pursuant to the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our principal executive officer and our principal financial officer, as appropriate to allow timely decisions regarding required disclosures.

In designing and evaluating the disclosure controls and procedures, we recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and we were required to apply our judgment in evaluating the cost-benefit relationship of possible controls and procedures. We have carried out an evaluation as of March 31, 2023 under the supervision, and with the participation, of our management, including our Chief Executive Officer (who serves as our principal executive officer) and our Chief Financial Officer (who serves as our principal financial officer), of the effectiveness of the design and operation of our disclosure controls and procedures.

Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of March 31, 2023 in providing reasonable assurance of achieving the desired control objectives.

(b) Changes in Internal Control Over Financial Reporting

There were no changes in the Company's internal controls over financial reporting that occurred during the three months ended March 31, 2023 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. The Company continues to review its disclosure controls and procedures, including its internal control over financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that the Company's systems evolve with its business.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings.

On August 12, 2022, the Company received a demand for arbitration (the "Demand") from GEM Yield Bahamas Limited and GEM Global Yield LLC SCS (collectively, "GEM"). The Demand claims that the Company's subsidiary, NeuroRx, Inc. ("NeuroRx"), failed to satisfy its obligation to pay GEM a commitment fee in the amount of HK$ 15,000,000 (approximately US$1,914,087 at current exchange rates) pursuant to a Share Subscription Facility Agreement, executed on October 18, 2019, by and among NeuroRx and GEM (the "Agreement"). NeuroRx expects to vigorously defend its position that payment of the commitment fee is neither due nor owing under the terms of the Agreement.

In addition to the matters described above, we may become involved in various legal actions incidental to our business. As of the date of this annual report, we are not involved in any other legal proceedings that we believe could have a material adverse effect on our financial position or results of operations, but regardless of the outcome, litigation can have an adverse impact on the Company because of defense and settlement costs, and diversion of management resources.

Item 1A. Risk Factors

We have disclosed the risk factors that materially affect our business, financial condition or results of operations under the heading “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2022 filed with the SEC on March 31, 2023 (the “Annual Report on Form 10-K”). There have been no material changes from the risk factors previously disclosed. You should carefully consider the risk factors set forth in the Annual Report on Form 10-K and other information set forth elsewhere in this Quarterly Report on Form 10-Q. You should be aware that these risk factors and other information may not describe every risk that we face. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial, or may not be able to assess, also may materially adversely affect our business, financial condition and/or operating results.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit Number	Description
10.1+	Amendment to Convertible Promissory Note, dated March 30, 2023, by and between NRx Pharmaceuticals, Inc. and Streetervillle Capital LLC.
31.1+	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2+	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1+†	Certification of Principal Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2+†	Certification of Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101*	Interactive data files pursuant to Rule 405 of Regulation S-T formatted in Inline XBRL: (i) Condensed Consolidated Balance Sheets as of March 31, 2023 (Unaudited) and December 31, 2022; (ii) Unaudited Condensed Consolidated Statements of Operations for the three months ended March 31, 2023 and 2022 ; (iii) Unaudited Condensed Consolidated Statements of Changes in Stockholders' Equity (Deficit) for the three months ended March 31, 2023 and 2022; (iv) Unaudited Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2023 and 2022; and (v) Notes to Unaudited Financial Statements.
104	Cover Page Interactive Data File (formatted in iXBRL and contained in Exhibit 101)

+ Filed herewith.
† This certification is being furnished solely to accompany this Quarterly Report pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation language in such filing.
* In accordance with Rule 406T of Regulation S-T, the XBRL-related information in Exhibit 101 to this Quarterly Report on Form 10-Q is deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act, is deemed not filed for purposes of section 18 of the Exchange Act, and otherwise is not subject to liability under these sections.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized

NRX PHARMACEUTICALS, INC.

Date: May 15, 2023

By: /s/ Seth Van Voorhees
Seth Van Voorhees
Chief Financial Officer (Principal Financial Officer)

Exhibit 10.1

AMENDMENT TO CONVERTIBLE PROMISSORY NOTE

This Amendment to Convertible Promissory Note (this "**Amendment**") is entered into as of March __, 2023, by and between STREETERVILLE CAPITAL, LLC, a Utah limited liability company ("**Lender**"), and NRX PHARMACEUTICALS, INC., a Delaware corporation ("**Borrower**"). Capitalized terms used in this Amendment without definition shall have the meanings given to them in the Note (as defined below).

A. Borrower previously issued to Lender that certain Convertible Promissory Note dated November 4, 2022 in the principal amount of $11,020,000.00 (the "**Note**").

B. Lender and Borrower have agreed, subject to the terms, conditions and understandings expressed in this Amendment, to amend the Note.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Recitals. Each of the parties hereto acknowledges and agrees that the recitals set forth above in this Amendment are true and accurate and are hereby incorporated into and made a part of this Amendment.

2. Amendment to Section 9. Section 9 of the Note is hereby deleted and replaced in its entirety with the following:

> "Notwithstanding anything to the contrary contained in this Note of the other Transaction Documents, Borrower shall not effect any conversion of this Note to the extent that after giving effect to such conversion would cause Lender (together with its affiliates) to beneficially own a number of shares exceeding 9.99% of the number of shares of Common Stock outstanding on such date (including for such purpose the Common Stock issuable upon such issuance) (the "**Maximum Percentage**"). For purposes of this section, beneficial ownership of Common Stock will be determined pursuant to Section 13(d) of the 1934 Act. By written notice to Borrower, Lender may increase, decrease or waive the Maximum Percentage as to itself but any such waiver will not be effective until the 61st day after delivery thereof. The foregoing 61-day notice requirement is enforceable, unconditional and non-waivable and shall apply to all affiliates and assigns of Lender."

3. Representations and Warranties. In order to induce Lender to enter into this Amendment, Borrower, for itself, and for its affiliates, successors and assigns, hereby acknowledges, represents, warrants and agrees as follows:

(a) Borrower has full power and authority to enter into this Amendment and to incur and perform all obligations and covenants contained herein, all of which have been duly authorized by all proper and necessary action. No consent, approval, filing or registration with or notice to any governmental authority is required as a condition to the validity of this Amendment or the performance of any of the obligations of Borrower hereunder.

(b) There is no fact known to Borrower or which should be known to Borrower which Borrower has not disclosed to Lender on or prior to the date of this Amendment which would or could materially and adversely affect the understanding of Lender expressed in this Amendment or any representation, warranty, or recital contained in this Amendment.

(c) Except as expressly set forth in this Amendment, Borrower acknowledges and agrees that neither the execution and delivery of this Amendment nor any of the terms, provisions, covenants, or agreements contained in this Amendment shall in any manner release, impair, lessen, modify, waive, or otherwise affect the liability and obligations of Borrower under the Note or any other transaction documents entered into in connection with the Note (the "**Transaction Documents**").

(d) Borrower has no defenses, affirmative or otherwise, rights of setoff, rights of recoupment, claims, counterclaims, actions or causes of action of any kind or nature whatsoever against Lender, directly or indirectly, arising out of, based upon, or in any manner connected with, the transactions contemplated hereby, whether known or unknown, which occurred, existed, was taken, permitted, or begun prior to the execution of this Amendment and occurred, existed, was taken, permitted or begun in accordance with, pursuant to, or by virtue of any of the terms or conditions of the Transaction Documents. To the extent any such defenses, affirmative or otherwise, rights of setoff, rights of recoupment, claims, counterclaims, actions or causes of action exist or existed, such defenses, rights, claims, counterclaims, actions and causes of action are hereby waived, discharged and released. Borrower hereby acknowledges and agrees that the execution of this Amendment by Lender shall not constitute an acknowledgment of or admission by Lender of the existence of any claims or of liability for any matter or precedent upon which any claim or liability may be asserted.

(e) Borrower represents and warrants that as of the date hereof no Events of Default or other material breaches exist under the Transaction Documents or have occurred prior to the date hereof.

4. Certain Acknowledgments. Each of the parties acknowledges and agrees that no property or cash consideration of any kind whatsoever has been or shall be given by Lender to Borrower in connection with this Amendment.

5. Other Terms Unchanged. The Note, as amended by this Amendment, remains and continues in full force and effect, constitutes legal, valid, and binding obligations of each of the parties, and is in all respects agreed to, ratified, and confirmed. Any reference to the Note after the date of this Amendment is deemed to be a reference to the Note as amended by this Amendment. If there is a conflict between the terms of this Amendment and the Note, the terms of this Amendment shall control. No forbearance or waiver may be implied by this Amendment. Except as expressly set forth herein, the execution, delivery, and performance of this Amendment shall not operate as a waiver of, or as an amendment to, any right, power, or remedy of Lender under the Note, as in effect prior to the date hereof. For the avoidance of doubt, this Amendment shall be subject to the governing law, venue, and Arbitration Provisions, as set forth in the Note.

6. No Reliance. Borrower acknowledges and agrees that neither Lender nor any of its officers, directors, members, managers, equity holders, representatives or agents has made any representations or warranties to Borrower or any of its agents, representatives, officers, directors, or employees except as expressly set forth in this Amendment and the Transaction Documents and, in making its decision to enter into the transactions contemplated by this Amendment, Borrower is not relying on any representation, warranty, covenant or promise of Lender or its officers, directors, members, managers, equity holders, agents or representatives other than as set forth in this Amendment.

7. Counterparts. This Amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one instrument. The parties hereto confirm that any electronic copy of another party's executed counterpart of this Amendment (or such party's signature page thereof) will be deemed to be an executed original thereof.

8. Further Assurances. Each party shall do and perform or cause to be done and performed, all such further acts and things, and shall execute and deliver all such other agreements, certificates, instruments and documents, as the other party may reasonably request in order to carry out the intent and accomplish the purposes of this Amendment and the consummation of the transactions contemplated hereby.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the undersigned have executed this Amendment as of the date set forth above.

LENDER:

STREETERVILLE CAPITAL, LLC

By: _____
John M. Fife, President

BORROWER:

NRX PHARMACEUTICALS, INC.

By: _____
Stephen Willard, CEO

[Signature Page to Amendment to Convertible Promissory Note]

Exhibit 31.1

CERTIFICATION OF THE CHIEF EXECUTIVE OFFICER
PURSUANT TO RULE 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Stephen H. Willard, Chief Executive Officer of NRx Pharmaceuticals, Inc., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of NRx Pharmaceuticals, Inc. (the "Registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Quarterly Report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the Registrant as of, and for, the periods presented in this Quarterly Report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant is made known to us by others within those entities, particularly during the period in which this Quarterly Report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: May 15, 2023

/s/ Stephen H. Willard
Stephen H. Willard
Chief Executive Officer (Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF THE ACTING CHIEF FINANCIAL OFFICER
PURSUANT TO RULE 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Seth Van Voorhees, Chief Financial Officer of NRx Pharmaceuticals, Inc., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of NRx Pharmaceuticals, Inc. (the "Registrant");

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Quarterly Report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the Registrant as of, and for, the periods presented in this Quarterly Report;

4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant is made known to us by others within those entities, particularly during the period in which this Quarterly Report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and

5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: May 15, 2023

/s/ Seth Van Voorhees
Seth Van Voorhees
Chief Financial Officer (Principal Financial Officer)

Exhibit 32.1

CERTIFICATION OF THE CHIEF EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the filing of the Quarterly Report on Form 10-Q for the three months ended March 31, 2023 (the "Report") by NRx Pharmaceuticals, Inc. (the "Registrant"), I, Stephen H. Willard, as Chief Executive Officer of the Registrant hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1. the Report fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and

2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: May 15, 2023

/s/ Stephen H. Willard
Stephen H. Willard
Chief Executive Officer (Principal Executive Officer)

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Registrant and will be retained by the Registrant and furnished to the Securities and Exchange Commission or its staff upon request

Exhibit 32.2

CERTIFICATION OF THE ACTING CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the filing of the Quarterly Report on Form 10-Q for the three months ended March 31, 2023 (the "Report") by NRx Pharmaceuticals, Inc. (the "Registrant"), I, Seth Van Voorhees, as Chief Financial Officer of the Registrant hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1.the Report fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and

2.the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: May 15, 2023

/s/ Seth Van Voorhees
Seth Van Voorhees
Chief Financial Officer (Principal Financial Officer)

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Registrant and will be retained by the Registrant and furnished to the Securities and Exchange Commission or its staff upon request.