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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, 2022

☐ **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

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 11, 2022, the registrant had 66,641,314 shares of common stock outstanding.

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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, 2022 (Unaudited)	December 31, 2021
ASSETS		
Current assets:		
Cash	$ 40,202	$ 27,605
Prepaid expenses and other current assets	3,382	5,109
Total current assets	43,584	32,714
Other assets	17	15
Total assets	$ 43,601	$ 32,729
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 4,311	$ 3,687
Accrued and other current liabilities	4,001	2,375
Accrued clinical site costs	466	469
Earnout Cash liability	2,479	4,582
Warrant liabilities	135	292
Note payable and accrued interest	520	518
Total liabilities	$ 11,912	$ 11,923
Stockholders' equity:		
Preferred stock, $0.001 par value, 50,000,000 shares authorized; 0 shares issued and outstanding at March 31, 2022 and December31, 2021, respectively	—	—
Common stock, $0.001 par value, 500,000,000 shares authorized; 66,641,314 and 58,810,550 shares issued and outstanding at March 31, 2022 and December 31, 2021, respectively	67	59
Additional paid-in capital	228,313	203,990
Accumulated deficit	(196,691)	(183,243)
Total stockholders' equity	31,689	20,806
Total liabilities and stockholders' equity	$ 43,601	$ 32,729

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

NRX PHARMACEUTICALS, INC.

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

(Unaudited)

	Three months ended March 31,	
	2022	2021
Operating expenses:		
Research and development	$ 5,483	$ 2,909
General and administrative	10,222	2,101
Settlement expense	—	21,366
Reimbursement of expenses from Relief Therapeutics	—	(771)
Total operating expenses	15,705	25,605
Loss from operations	(15,705)	(25,605)
Other (income) expenses:		
Gain on extinguishment of debt	—	(121)
Interest expense	3	5
Change in fair value of warrant liability	(157)	—
Change in fair value of Earnout Cash liability	(2,103)	—
Total other (income) expenses	(2,257)	(116)
Net loss	$ (13,448)	$ (25,489)
Net loss per share:		
Basic and diluted	$ (0.21)	$ (0.71)
Weighted average common shares outstanding:		
Basic and diluted	63,667,468	35,658,216

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

NRX PHARMACEUTICALS, INC.

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

(Unaudited)

	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**

	Common Stock		Additional Paid-in-Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount			
Balance - December 31, 2020	**42,973,462**	**$ 43**	**$ 46,366**	**$ (90,180)**	**$ (43,771)**
Common stock issued	333,121	—	6,927	—	6,927
Proceeds from issuance of common stock for exercise of warrant	1,496,216	1	7,499	—	7,500
Reclassification of settlement liability upon issuance of warrant	—	—	60,852	—	60,852
Stock-based compensation	—	—	372	—	372
Net loss	—	—	—	(25,489)	(25,489)
Balance - March 31, 2021	**44,802,799**	**$ 44**	**$ 122,016**	**$ (115,669)**	**$ 6,391**

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,	
	2022	2021
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (13,448)	$ (25,489)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	1	—
Stock-based compensation	1,334	372
Gain on extinguishment of debt	—	(121)
Change in fair value of warrant liabilities	(157)	—
Change in fair value of earnout cash liability	(2,103)	—
Non-cash interest expense	2	5
Non-cash settlement expense	—	21,366
Changes in operating assets and liabilities:		
Accounts receivable	—	831
Prepaid expenses and other assets	1,727	(50)
Accounts payable	624	1,229
Accrued expenses and other liabilities	1,640	(1,158)
Net cash used in operating activities	(10,380)	(3,015)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of computer equipment	(3)	—
Net cash used in investing activities	(3)	—
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of common stock, net of transaction costs	—	6,927
Proceeds from issuance of common stock for exercise of warrant	—	7,500
Proceeds from issuance of common stock and warrants issued in private placement, net of issuance costs	22,980	—
Net cash provided by financing activities	22,980	14,427
Net increase in cash	12,597	11,412
Cash at beginning of period	27,605	1,859
Cash at end of period	$ 40,202	$ 13,271
Supplemental disclosure of cash flow information:		
Non-cash investing and financing activities		
Reclassification of settlement liability upon issuance of warrant	$ —	$ 60,852
Issuance of common stock warrants as offering costs	$ 726	$ —
Extinguishment of Paycheck Protection Program Loan	$ —	$ 121
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"), and 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 that develops novel therapeutics for the treatment of central nervous system disorders and the treatment and prevention of life-threatening pulmonary diseases through its wholly-owned operating subsidiary, NeuroRx. The Company's foundation product, NRX-101 (d-Cylcoserine/Lurasidone), for the treatment of suicidal bipolar depression, 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. The Company's product for the treatment of acute respiratory distress in Critical COVID-19 patients, ZYESAMI®, has been awarded Fast Track designation by the FDA. ZYESAMI is included in the National Institutes of Health ("NIH") ACTIV-3b Phase III clinical study.

2. Liquidity

As of March 31, 2022, the Company had $40.2 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 is dependent on its ability to continue to raise equity and/or debt financing to continue operations.

On August 23, 2021, the Company completed a private placement and issued 2,727,273 shares of common stock and preferred investment options to purchase up to an aggregate of 2,727,273 shares of common stock. The purchase price for one share of common stock and one preferred investment option was $11.00. The preferred investment options have an exercise price of $12.00. The net proceeds to the Company from the Private Placement were approximately $27.4 million.

On February 2, 2022, the Company completed a private placement and issued 7,824,727 shares of common stock and preferred investment options to purchase up to an aggregate of 7,824,727 shares of common stock. The purchase price for one share of common stock and one preferred investment option was $3.195. The preferred investment options have an exercise price of $3.07 per share. The net proceeds to the Company were approximately $23.0 million.

The Company believes that it currently has sufficient funds and, if necessary, the ability to reduce expenditures, to support operations through at least the next twelve months from the date the condensed consolidated financial statements are issued. The Company cannot make any assurances that additional financing will be available to it and, if available, on acceptable terms or at all. This could negatively impact the Company's business and operations and could also lead to the reduction of the Company's operations.

NRX PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

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.

The Merger was accounted for as a reverse recapitalization in accordance with GAAP (the "Reverse Recapitalization"). Under this method of accounting, BRPA is treated as the "acquired" company and NeuroRx is treated as the acquirer for financial reporting purposes.

Accordingly, for accounting purposes, the Reverse Recapitalization was treated as the equivalent of NeuroRx issuing stock for the net assets of BRPA, accompanied by a recapitalization. The net assets of BRPA are stated at historical cost, with no goodwill or other intangible assets recorded.

The consolidated results of operations prior to the Reverse Recapitalization are those of NeuroRx. The shares and corresponding capital amounts and losses per share, prior to the Merger, have been retroactively restated based on shares reflecting the exchange ratio established in the Merger.

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 Earnout Cash liability, valuation of common and preferred stock, 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.

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 11)

Concentration of Credit Risk and Off-Balance Sheet Risk

Cash is the only financial instrument that is potentially subject to concentrations of credit risk. The Company's cash is deposited in accounts at large financial institutions, and amounts may exceed federally insured limits. The Company believes it is not exposed to significant credit risk due to the financial strength of the depository institutions in which the cash is held. The Company has no financial instruments with off-balance sheet risk of loss.

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.

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 recorded at their initial fair value on the date of issuance, 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 (see Notes 9 and 11).

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 earnings per share excludes, when applicable, the potential impact of stock options, common stock warrant shares, 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,	
	2022	2021
Stock options	2,906,948	489,255
Common stock warrants	17,521,753	1,200,307
Earnout Shares	22,209,280	—
Earnout Shares from exercised Substitute Options and Substitute Warrants	1,229,925	—

Since the closing of the Merger, of the 516,025 shares of common stock issued for the exercise of stock options, 185,472 shares of common stock are contingently issuable Earnout Shares and are excluded from the weighted average shares outstanding for computing EPS until the contingent conditions are satisfied. There are 1,044,453 shares of common stock issued pursuant to the GEM warrants which are contingently issuable Earnout Shares and are excluded from the weighted average shares outstanding for computing EPS until the contingent conditions are satisfied.

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, 2022, 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, 2021, that management believes materially affect the Company's present or future results of operations, overall financial condition, liquidity or disclosures.

4. Reverse Recapitalization

As discussed in Note 1, on May 24, 2021 (the "Closing Date"), BRPA and Merger Sub closed the Merger with NeuroRx, as a result of which NeuroRx became a wholly-owned subsidiary of BRPA. While BRPA was the legal acquirer of NeuroRx in the Merger, for accounting purposes, the Merger is treated as a Reverse Recapitalization whereby NeuroRx is deemed to be the accounting acquirer and the historical financial statements of NeuroRx became the historical financial statements of BRPA (renamed NRX Pharmaceuticals, Inc.) upon the closing of the Merger. Under this method of accounting, BRPA is treated as the "acquired" company and NeuroRx is treated as the acquirer for financial reporting purposes. Accordingly, for accounting purposes, the Merger was treated as the equivalent of NeuroRx issuing stock for the net assets of BRPA, accompanied by a recapitalization. The net assets of BRPA were stated at historical cost, with no goodwill or other intangible assets recorded.

Pursuant to the Merger Agreement, the aggregate consideration payable to stockholders of NeuroRx at the Closing Date consists of 50,000,000 shares ("Closing Consideration") of BRPA common stock ("Common Stock"). At the effective time of the Merger (the "Effective Time") each share of NeuroRx common stock and each share of the NeuroRx convertible preferred stock that was convertible into a share of NeuroRx common stock at a one-to-one ratio pursuant to the NeuroRx certificate of incorporation, was converted into Common Stock equal to 3.16 (the "Exchange Ratio"). Each option and 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 an option or warrant to acquire an adjusted number of shares of Common Stock at an adjusted exercise price per share, in each case, pursuant to the terms of the Merger Agreement (the "Substitute Options" and the "Substitute Warrants," respectively), based on an exchange ratio of 4.96:1 (the "Option Exchange Ratio"), and will continue to be governed by substantially the same terms and conditions, including vesting, as were applicable to the original instrument.

In addition, the securityholders of NeuroRx (including option holders and warrant holders) who own NeuroRx securities immediately prior to the Effective Time received the contingent right to receive the Earnout Shares and Earnout Cash (each as defined below). At the Effective Time, each outstanding share of NeuroRx common stock, including shares of NeuroRx common stock resulting from the conversion of outstanding shares of NeuroRx preferred stock (as calculated pursuant to the NeuroRx certificate of incorporation), immediately prior to the Effective Time, was converted into the right to receive a pro rata portion of the Closing Consideration and the contingent right to receive a pro rata portion of the Earnout Shares and Earnout Cash.

Pursuant to the terms of the Merger Agreement, NeuroRx's securityholders (including option holders and warrant holders) who owned NeuroRx securities immediately prior to the Effective Time have the contingent right to receive their pro rata portion of (i) an aggregate of 25,000,000 shares of Common Stock ("Earnout Shares"), of which 935,608 and 1,920,492 are subject to the terms and conditions of the Substitute Options and Substitute Warrants, if, prior to December 31, 2022, the NRX COVID-19 Drug (as defined in the Merger Agreement) receives emergency use authorization by the FDA and NeuroRx submits and the FDA files for review a new drug application for the NRX COVID-19 Drug (the occurrence of the foregoing, the "Earnout Shares Milestone"), and (ii) an aggregate of $100.0 million in cash ("Earnout Cash") upon the earlier to occur of (x) FDA approval of the NRX COVID-19 Drug and the listing of the NRX COVID-19 Drug in the FDA's "Orange Book" and (y) FDA approval of the NeuroRx Antidepressant Drug Regimen (i.e., NRX-100/101) and the listing of the NeuroRx Antidepressant Drug Regimen (i.e., NRX-100/101) in the FDA's "Orange Book," in each case prior to December 31, 2022 (the occurrence of either of clauses (x) or (y), the "Earnout Cash Milestone"). If the Earnout Shares

NRX PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Milestone is achieved, the Earnout Shares will be issued within five (5) Business Days after the occurrence of the Earnout Shares Milestone. If the Earnout Cash Milestone is achieved, the Merger Agreement does not require the Earnout Cash to be delivered to NeuroRx securityholders within any specified period of time, and the board of directors of NRx Pharmaceuticals will use its good faith judgment to determine the date to pay the Earnout Cash. The Earnout Cash Milestone was recognized as a contingent liability and measured at an estimated fair value at the Closing Date and will be remeasured at estimated fair value at each period end thereafter until earned or December 31, 2022 (see Note 11). The Earnout Shares Milestone was recognized in equity. The benefit of the contingent right to receive Earnout Shares and Earnout Cash for option and warrant holders occurs through the Option Exchange Ratio and therefore the amount of Earnout Shares and Earnout Cash for common stockholders is approximately 22,209,280 shares and $88.8 million.

In the event that either the Earnout Shares Milestone or the Earnout Cash Milestone does not occur prior to December 31, 2022, each Substitute Option and Substitute Warrant will be adjusted such that the number of shares of Common Stock subject to each adjusted Substitute Option or Substitute Warrant, the exercise price per share of each adjusted Substitute Option or Substitute Warrant and the aggregate intrinsic value of each adjusted Substitute Option or Substitute Warrant will equal the respective number of shares, exercise price per share and aggregate intrinsic value that would have resulted following the adjustment of the applicable underlying option or warrant had the conversion of the legacy NeuroRx option and warrants into the Substitute Options or Substitute Warrants been applied using the Exchange Ratio (3.16:1). If neither the Earnout Shares Milestone nor the Earnout Cash Milestone occurs, each Substitute Option and Substitute Warrant will be adjusted based on the Exchange Ratio. If any Substitute Options or Substitute Warrants are exercised prior to the earlier of (i) the date that both the Earnout Shares Milestone and Earnout Cash Milestone occur and (ii) December 31, 2022, a sufficient number of shares of Common Stock will be held in escrow pending the applicable adjustment to such Substitute Options or Substitute Warrants. Following the determination of that adjustment, NRx Pharmaceuticals will retain any shares forfeited by the option or warrant holder in connection with the adjustment and return any remaining shares to the option or warrant holder.

5. Prepaid Expenses and Other Current Assets

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

	March 31, 2022 (Unaudited)	December 31, 2021
Prepaid expenses and other current assets:		
Prepaid insurance	$ 2,071	$ 3,224
Prepaid manufacturing expenses	617	1,028
Prepaid clinical development expenses	538	512
Other prepaid expenses	156	345
Total prepaid expenses and other current assets	$ 3,382	$ 5,109

6. Accrued and Other Current Liabilities

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

	March 31, 2022 (Unaudited)	December 31, 2021
Accrued and other current liabilities:		
Professional services	$ 1,054	$ 743
Accrued research and development expenses	757	1,055
Accrued employee expenses	137	456
Other accrued expenses	2,053	121
Total accrued and other current liabilities	$ 4,001	$ 2,375

NRX PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

7. Notes Payable

Relief Therapeutics Loan

On April 6, 2020, the Company entered into a loan agreement (the "Relief Therapeutics Loan") with Relief Therapeutics Holding S.A. ("Relief Therapeutics") in the amount of $0.5 million. The Relief Therapeutics Loan matured on April 6, 2022 and bears interest at 2% per annum payable in arrears. The Relief Therapeutics Loan was paid in full on April 6, 2022.

Paycheck Protection Program Loan

On April 28, 2020, the Company received $0.1 million in loan funding from the Paycheck Protection Program (the "PPP Loan"), established pursuant to the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") and administered by the U.S. Small Business Administration ("SBA"). The unsecured PPP Loan accrued interest on the outstanding principal at the rate of 1% per annum.

The Company received full forgiveness of all outstanding principal and accrued and unpaid interest on the PPP Loan as of February 11, 2021. The forgiveness of the PPP Loan qualified for debt extinguishment in accordance with ASC 470-50, *Debt Modifications and Extinguishment*s, and as a result, the outstanding principal and accrued and unpaid interest was written off in the amount of $0.1 million and less than $0.1 million, respectively, and the Company recorded a gain on extinguishment totaling $0.1 million for the three months ended March 31, 2021.

The following table summarizes the Company's outstanding notes payable as of the respective periods (in thousands).

	March 31, 2022 (Unaudited)	December 31, 2021
Relief Therapeutics loan	$ 500	500
Carrying value of note payable	500	500
Accrued interest	20	18
Note payable and accrued interest, current	$ 520	$ 518

8. 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, 2022 and 2021 was $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. As of March 31, 2022, the Company has paid NJ Health $0.3 million of the total committed amount.

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ZYESAMI Manufacturing, Production, Supply and Distribution Agreements

On August 25, 2020, the Company and Nephron Pharmaceuticals Corporation ("Nephron") signed an agreement for the manufacturing of finished pharmaceutical product of Aviptadil intravenous formulation and the development of an inhaled (nebulizer) formulation of Aviptadil. The Company has agreed to purchase products from Nephron for a fixed price.

On September 29, 2020, the Company and Cardinal Health signed an exclusive distribution agreement, as well as a third-party logistics agreement on October 1, 2020. Cardinal Health will manage warehousing, distribution, and invoicing for the potential sale of Aviptadil in the U.S. and Puerto Rico.

On October 9, 2020, the Company signed an agreement with PolyPeptide Group, North America for the supply of Good Manufacturing Practice Grade Active Pharmaceutical Ingredient ("API") Aviptadil. This gives NRx Pharmaceuticals a significant reduction in the cost of procuring API. The Company has agreed to purchase a total of $5.3 million worth of product and services, of which $2.4 million has not been paid for as of March 31, 2022.

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. Relief Therapeutics reimbursed the Company $10.9 million but has subsequently declined to reimburse the Company for additional costs of research and development. The Company advised Relief Therapeutics that the Company is funding those costs with other capital. 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. Relief Therapeutics' complaint seeks several remedies, including damages for alleged breaches of the terms of the Collaboration Agreement. The Company believes the lawsuit is baseless and without merit. On January 10, 2022, the Company filed a complaint in New York State Court, claiming Relief Therapeutics breached and repudiated the Collaboration Agreement. The Company's complaint seeks damages of at least $185.0 million. The parties to the lawsuit have agreed to engage in mediation in an effort to amicably resolve the litigation. If the mediation does not resolve the dispute, the Company intends to defend itself vigorously and to prosecute its claims against Relief Therapeutics.

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.

Share Subscription Facility Agreement - GEM

In 2019, NeuroRx entered into a share subscription facility agreement (the "GEM Agreement") with GEM Global Yield LLC SCS and GEM Yield Bahamas Limited (collectively, referred to as "GEM") with a three-year term. 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. If NeuroRx were listed or completed a private transaction resulting in a change of control of the Company, NeuroRx would be required to 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 GEM Agreement. The reverse merger contemplated by the Merger Agreement did not result in a listing of NeuroRx shares or a change in control.

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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 warrants 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 warrants are not conditional upon any further events or completion of the merger.

The warrants were issued March 28, 2021, for 3,329,812 shares of NeuroRx common stock at an exercise price of $3.19 per share (the "GEM Warrants") and the parties agreed that GEM would immediately exercise a portion of the warrants for the purchase of 1,496,216 shares ("Initial Exercised Shares") for $7.5 million. The GEM Warrants are valid for a period of three years from the date of the consummation of the reverse merger transaction contemplated by the Merger Agreement, which was May 24, 2021.

This contingent liability at December 31, 2020, represented an obligation that resulted in the issuance of certain equity at a discounted per share price. As the amount was deemed probable and estimable at December 31, 2020, NeuroRx recorded a liability of $39.5 million to reflect the fair value of the GEM Warrants. On March 28, 2021, NeuroRx recorded additional settlement liability of $21.4 million to reflect the change in the fair value of the Company's common stock. On March 28, 2021, NeuroRx reclassed the settlement liability to equity upon the issuance of the GEM Warrants.

On July 27, 2021, GEM exercised the remaining GEM Warrants for the purchase of 1,833,596 shares (adjusted for the Merger, discussed in Note 9) for gross proceeds to the Company of $9.2 million and the GEM Warrants were extinguished.

9. Equity

Common Stock

Upon closing of the Merger, pursuant to the terms of the Second Amended and Restated Certificate of Incorporation, the Company authorized 500,000,000 shares of common stock with a par value $0.001. As discussed in Note 4, we have retroactively adjusted the shares issued and outstanding prior to May 24, 2021 to give effect to the Exchange Ratio established in the Merger Agreement to determine the number of shares of common stock into which they were converted.

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.

The Company sold 1,829,337 shares of common stock during the three months ended March 31, 2021, and received gross proceeds of $14.4 million.

Preferred Stock

Upon closing of the Merger, pursuant to the terms of the Second Amended and Restated Certificate of Incorporation, the Company authorized 50,000,000 shares of preferred stock with a par value $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 the Substitute Warrants, based on the Option Exchange Ratio (of 4.96), and will continue to be governed by substantially the same terms and conditions, including vesting, as were applicable to the former warrant. Each Substitute Warrant will be exercisable for a number of whole shares of Common Stock equal to the product of the number of shares of NeuroRx common stock underlying such NeuroRx warrant multiplied by the Option Exchange Ratio, and the per share exercise price of such Substitute Warrant

will be equal to the quotient determined by dividing the exercise price per share of NeuroRx common stock by the Option Exchange Ratio. As discussed in Note 4, this ratio incorporates the achievement of the Earnout Shares Milestone and Earnout Cash Milestone. The incremental shares above the Exchange Ratio (of 3.16) upon exercise would be held back pending the outcome of the contingencies and only released if such are achieved. The percentage of total shares of Common Stock subject to each Substitute Warrant that is vested immediately following the Effective Time will equal the percentage of total shares of NeuroRx common stock subject to each NeuroRx warrant that is vested immediately prior to the Effective Time.

In the event that either the Earnout Shares Milestone or the Earnout Cash Milestone does not occur prior to December 31, 2022, each Substitute Warrant will be adjusted such that the number of shares of Common Stock subject to each adjusted Substitute Warrant, the exercise price per share of each adjusted Substitute Warrant and the aggregate intrinsic value of each adjusted Substitute Warrant will equal the respective number of shares, exercise price per share and aggregate intrinsic value that would have resulted following the adjustment of the applicable underlying Substitute Warrant had the conversion of NeuroRx warrants into the Substitute Warrants been applied using the Exchange Ratio (3.16:1) as adjusted accordingly to reflect the impact of the respective milestone not being met. If neither the Earnout Shares Milestone nor the Earnout Cash Milestone occurs, each Substitute Warrant will be adjusted based on the Exchange Ratio.

If any Substitute Warrants are exercised prior to the earlier of (i) the date that both the Earnout Shares Milestone and Earnout Cash Milestone occur and (ii) December 31, 2022, a sufficient number of shares of Common Stock will be held back pending the applicable adjustment to such Substitute Warrants. Following the determination of that adjustment, NRx Pharmaceuticals will retain any shares forfeited by the warrant holder in connection with the adjustment and return any remaining shares to the warrant holder.

Upon the closing of the Merger, the outstanding and unexercised NeuroRx warrants became warrants to purchase an aggregate 4,909,066 shares of the Company's common stock with an average exercise price of $2.45 per share. The Company accounted for the Substitute Warrants as a modification of the existing warrants. Incremental fair value, measured as the excess, if any, of the fair value of the modified warrants over the fair value of the original warrants immediately before its terms are modified, is measured based on the fair value of the underlying shares and other pertinent factors at the modification date. The fair value of the original NeuroRx warrants and Substitute Warrants was determined using the Black-Scholes option-pricing model with the following assumptions for each:

	Original Warrants	Substitute Warrants
Strike price	$7.58-$15.84	$1.53-$3.19
Volatility rate	80.0%	80.0%
Risk-free rate	0.03%-0.32%	0.03%-0.32%
Expected term	0.57-4.42	0.57-4.42
Dividend yield	—	—

With respect to warrants held by certain members of our Board of Directors, the Substitute Warrants were determined to be within the scope of ASC 718 and were fully vested at the Effective Date. Further, the Substitute Warrants were determined to contain both service-based and performance-based vesting conditions (i.e., the achievement of the Earnout Cash Milestone and/or Earnout Shares Milestone). The Company determined it was not probable that the Earnout Cash Milestone or Earnout Shares Milestone would be met on the Effective Date and at March 31, 2022. Accordingly, the Company will only recognize incremental compensation cost related to the portion of the Substitute Warrants subject to service-based vesting conditions only. The Company will reevaluate the probability of the Earnout Cash Milestone and/or Earnout Shares Milestone being met and recognize any unamortized incremental compensation cost accordingly in the period during which it becomes probable the milestones will be met. The Company recognized incremental compensation in the second quarter of 2021 on the modification date totaling $2.3 million which was recognized in general and administrative in the Consolidated Statement of Operations. Unamortized compensation costs related to performance-based vesting conditions of the Substitute Warrants as of the modification date was $23.8 million.

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In the event the Earnout Shares Milestone and Earnout Cash Milestones are met, the Company will recognize an additional deemed dividend of $24.4 million and $3.1 million, respectively, if and when such conditions are met.

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 and expire five years after the Effective Time or earlier upon their redemption or liquidation of the Company.

The Company may redeem the Public Warrants:

- in whole and not in part;
- at a price of $0.01 per warrant;
- at any time during the exercise period;
- upon a minimum of 30 days' prior written notice of redemption;
- if, and only if, the last sale price of the Company's common stock equals or exceeds $21.00 per share for any 20 trading days within a 30-trading day period ending on the third business day prior to the date on which the Company sends the notice of redemption to the warrant holders; and
- if, and only if, there is a current registration statement in effect with respect to the shares of common stock underlying such warrants.

Certain of the above conditions have not been met to redeem the Public Warrants. If the Company calls the Public Warrants for redemption, management will have the option to require all holders that wish to exercise the Public Warrants to do so on a "cashless basis," as described in the warrant agreement.

The exercise price and number of shares of common stock issuable upon exercise of the warrants may be adjusted in certain circumstances including in the event of a stock dividend, or recapitalization, reorganization, merger or consolidation. However, the warrants will not be adjusted for issuance of common stock at a price below its exercise price. Additionally, in no event will the Company be required to net cash settle the warrants.

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

Assumed Placement Warrants

Prior to the Merger, the Company had outstanding 136,250 Placement Warrants. The Placement Warrants are identical to the Public Warrants except that the Placement Warrants (i) are not redeemable by the Company and (ii) may be exercised for cash or on a cashless basis, so long as they are held by the initial purchaser or any of its permitted transferees. If the Placement Warrants are held by someone other than the initial purchasers or their permitted transferees, the Placement Warrants will be redeemable by the Company and exercisable by such holders on the same basis as the Public 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, 2022. The Company measures the fair value of the warrants at the end of each reporting period and recognizes changes in the fair value from the prior period in the Company's operating results for the current period.

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The Company recognized a gain on the change in fair value of the Placement Warrants for the three months ended March 31, 2022 of $0.2 million. Refer to Note 11 for discussion of fair value measurement of the warrant liabilities.

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

	Total Warrants	Weighted Average Remaining Term (in years)	Weighted Average Exercise Price	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2021	9,305,790	3.62	$ 9.09	$ 4,942
Issued	8,215,963	5.50	3.11	—
Outstanding as of March 31, 2022	17,521,753	4.29	$ 6.29	$ 15

Preferred Investment Options (included in above warrants table)

On February 2, 2022, the Company completed a private placement and issued 7,824,727 shares of common stock and Preferred Investment Options to purchase up to an aggregate of 7,824,727 shares of common stock. The Preferred Investment Options have an exercise price of $3.07 per share and may be exercised any time on or after August 2, 2022.

The form of the Preferred Investment Option is a warrant. The measurement of fair value was determined utilizing a Black-Scholes model considering all relevant assumptions current at February 2, 2022, the date of issuance (i.e., share price of $2.94, exercise price of $3.07, term of five years beginning August 2, 2022, volatility of 82.8%, risk-free rate of 1.60%, and expected dividend rate of 0%). The grant date fair value of these Preferred Investment Options was estimated to be $15.5 million on February 2, 2022 and is reflected within additional paid-in capital as of March 31, 2022.

In addition, on February 2, 2022, the Company issued fully vested Preferred Investment Options to the placement agent with an exercise price of $3.99. As these Preferred Investment Options were issued for services provided in facilitating the private placement, the Company recorded the fair value of such Preferred Investment Options as a cost of capital on the issuance date. The measurement of fair value was determined utilizing a Black-Scholes model considering all relevant assumptions current at February 2, 2022, the date of issuance (i.e., share price of $2.94, exercise price of $3.99, term of five years beginning August 2, 2022, volatility of 82.8%, risk-free rate of 1.60%, and expected dividend rate of 0%).

10. 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 Option Exchange Ratio (of 4.96), and will continue to be governed by substantially the same terms and conditions, including vesting, as were applicable to the former option. Each Substitute Option will be exercisable for a number of whole shares of Common Stock equal to the product of the number of shares of NeuroRx common stock underlying such NeuroRx option multiplied by the Option Exchange Ratio, and the per share exercise price of such Substitute Option will be equal to the quotient determined by dividing the exercise price per share of NeuroRx common stock by the Option Exchange Ratio. As discussed in Note 4, this ratio incorporates the achievement of the Earnout Shares Milestone and Earnout Cash Milestone. The incremental shares above the Exchange Ratio (of 3.16) upon exercise would be held back pending the outcome of the contingencies and only released if such are achieved. The percentage of total shares of Common Stock

subject to each Substitute Option that is vested immediately following the Effective Time will equal the percentage of total shares of NeuroRx common stock subject to each NeuroRx option that is vested immediately prior to the Effective Time.

In the event that either the Earnout Shares Milestone or the Earnout Cash Milestone does not occur prior to December 31, 2022, each Substitute Option will be adjusted such that the number of shares of Common Stock subject to each adjusted Substitute Option, the exercise price per share of each adjusted Substitute Option and the aggregate intrinsic value of each adjusted Substitute Option will equal the respective number of shares, exercise price per share and aggregate intrinsic value that would have resulted following the adjustment of the applicable underlying Substitute Option had the conversion of NeuroRx options into the Substitute Options been applied using the Exchange Ratio as adjusted accordingly to reflect the impact of the respective milestone not being met. If neither the Earnout Shares Milestone nor the Earnout Cash Milestone occurs, each Substitute Option will be adjusted based on the Exchange Ratio.

As stated in the Merger Agreement, if any Substitute Options are exercised prior to the earlier of (i) the date that both the Earnout Shares Milestone and Earnout Cash Milestone occur and (ii) December 31, 2022, a sufficient number of shares of Common Stock will be held back pending the applicable adjustment to such Substitute Options. Following the determination of that adjustment, NRx Pharmaceuticals will retain any shares forfeited by the option holder in connection with the adjustment and return any remaining shares to the option holder.

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. The Company accounted for the Substitute Options as a modification of the existing options. Incremental compensation costs, measured as the excess, if any, of the fair value of the modified options over the fair value of the original options immediately before its terms are modified, is measured based on the fair value of the underlying shares and other pertinent factors at the modification date. The fair value of the original NeuroRx options and Substitute Options was determined using the Black-Scholes option-pricing model with the following assumptions for each:

	Original Options	Substitute Options
Strike price	$1.00-$72.30	$0.20-$14.58
Volatility rate	80.0%	80.0%
Risk-free rate	0.07%-0.79%	0.07%-0.79%
Expected term	0.18-5.99	0.18-5.99
Dividend yield	—	—

The Substitute Options contain both service-based and performance-based vesting conditions (i.e., the achievement of the Earnout Cash Milestone and/or Earnout Shares Milestone). The Company determined it was not probable that the Earnout Cash Milestone or Earnout Shares Milestone would be met on the Effective Date and at March 31, 2022. Accordingly, the Company will only recognize incremental compensation cost related to the portion of the Substitute Options subject to service-based vesting conditions only. The Company will reevaluate the probability of the Earnout Cash Milestone and/or Earnout Shares Milestone being met and recognize any unamortized incremental compensation cost accordingly in the period during which it becomes probable the milestones will be met.

For unvested Substitute Options, the Company will recognize incremental compensation over the remaining requisite service period, the sum of the incremental compensation cost and the remaining unrecognized compensation cost for the original award on the modification date, taking into consideration the probability of the achievement of the Earnout Cash Milestone and/or Earnout Shares Milestone. Incremental compensation costs related to unvested Substitute Options as of the modification date was $25.9 million.

2021 Omnibus Incentive Plan

At the Effective Time, the Company adopted the 2021 Omnibus Incentive Plan (the "2021 Plan"). As of March 31, 2022, 6,049,178 shares of Common Stock are authorized for issuance pursuant to awards under the 2021 Plan. As of January 1,

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2022, 676,129 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. The Substitute Options do not reduce the number of shares authorized for grant under the 2021 Plan. As of March 31, 2022, 5,154,123 shares have been awarded and 895,055 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 following assumptions were used during the following periods:

	March 31, 2022 (Unaudited)	December 31, 2021
Exercise price	$2.61-$3.10	$6.44-$23.41
Risk-free rate of interest	1.80%-2.56%	0.69%-1.45%
Expected term (years)	5.5-6.5	5.25-6.5
Expected stock price volatility	82.8%	80.0%-85.9%
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 term (years)	Aggregate intrinsic value (in thousands)
Outstanding as of December 31, 2021	2,400,315	$ 6.28	7.8	$ 4,224
Granted	552,000	3.00	10.0	—
Forfeited	(45,367)	(14.05)	—	—
Outstanding as of March 31, 2022	2,906,948	$ 5.54	8.0	$ 1,006
Options vested and exercisable as of March 31, 2022	1,131,708	$ 3.09	6.2	$ 969

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. The weighted average grant date fair value per share for employee stock and non-employee option grants during the three months ended March 31, 2021 was $10.00. At March 31, 2022, the total unrecognized compensation related to unvested employee and non-employee stock option awards granted, including

unrecognized compensation costs related to Substitute Options of $25.9 million, was $30.4 million, of which the Company expects to recognize $5.9 million over a weighted-average period of approximately 1.87 years.

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

	Three months ended March 31,	
	2022	2021
Stock-based compensation expense		
General and administrative	$ 1,116	$ 344
Research and development	218	28
Total stock-based compensation expense	$ 1,334	$ 372

11. 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, 2022 and the year ended December 31, 2021. The carrying amount of accounts payable approximated fair value as they are short term in nature. The fair value of warrants issued for settlement and services are estimated based on the Black-Scholes model during the three months ended March 31, 2022 and the year ended December 31, 2021. The carrying value of notes payable approximated the estimated fair values due to their recent issuances.

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 warrant liabilities and Earnout Cash contingent consideration represent Level 3 measurements. The following table presents information about the Company's liabilities that are measured at fair value on a recurring basis at March 31, 2022 and December 31, 2021, and indicates the fair value hierarchy of the valuation inputs the Company utilized to determine such fair value (in thousands):

Description	Level	March 31 2022	December 31 2021
		(Unaudited)	
Liabilities:			
Warrant liabilities (Note 10)	3	$ 135	$ 292
Earnout Cash liability (Note 4)	3	$ 2,479	$ 4,582

Warrant liabilities

The Company utilizes a Black-Scholes model approach to value the Placement 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 binomial 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 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 to remain at zero.

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

	March 31, 2022
Stock price on valuation date	$ 2.45
Exercise price per share	$ 11.50
Expected life	4.15
Volatility	94.9%
Risk-free rate	2.43%
Dividend yield	0.00%
Fair value of warrants	$ 0.99

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

	March 31, 2022
Balance as of December 31, 2021	$ 292
Gain upon re-measurement	(157)
Balance as of March 31, 2022	$ 135

Earnout Cash liability

The fair value of the Earnout Cash liability has been estimated using probability-weighted discounted cash flow models (DCFs) with significant inputs that are not observable in the market and thus represents a Level 3 fair value measurement as defined in ASC 820. The most significant inputs include whether (a) if the Company files an NDA, that the FDA approves the Company's NDA for ZYESAMI and/or NRX-101, (b) if such approval is granted, whether such approval will be received on or before December 31, 2022, and (c) if such approval is granted, whether ZYESAMI and/or NRX-101 will be listed in the FDA's Orange Book on or before December 31, 2022. The DCFs incorporate Level 3 inputs including estimated discount rates that the Company believes market participants would consider relevant in pricing and the projected timing and amount of cash flows, which are estimated and developed, considering the uncertainties associated with the obligations.

A reconciliation of the Earnout Cash liability is included below (in thousands):

	March 31, 2022
Balance as of December 31, 2021	$ 4,582
Gain upon re-measurement	(2,103)
Balance as of March 31, 2022	$ 2,479

12. Income Taxes

The Company recorded no provision or benefit for income tax expense for the three months ended March 31, 2022 and 2021, 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, 2022.

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13. 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, 2022, the Company paid a co-founder $0.1 million 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. The Excluded Technology will transfer to the Company for no additional consideration if aggregate the value of NRx Pharmaceuticals equity held by Glytech exceeds $50.0 million on any date prior to August 6, 2022, based on the average daily value of the equity held by Glytech during a period of 20 consecutive days prior to such date. The Company believes the criteria have been met pending the registration of Glytech shares.

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 $0.4 million and $0.1 million during the three months ended March 31, 2022 and 2021, respectively. These services are ongoing.

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 Interim 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 $0.1 million during the three months ended March 31, 2022. These services are ongoing.

In addition, the Company pays PillTracker for digital health product development required to track the use of Aviptadil in clinical trials. FDA guidance recommends such solutions. 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.

On July 26, 2021, the Company and PillTracker entered into a statement of work ("SOW") under the Master Service Agreement dated April 1, 2020 ("MSA"). Under this SOW, PillTracker provides support for the inhaled ZYESAMI Phase 2/3 clinical trials by monitoring SP02 and Heart Rate in patients in a sub-study of the AVICOVID-2 clinical trial in the U.S. to determine the physiological effects of ZYESAMI vs. a placebo. PillTracker's responsibilities include set-up, patient monitoring, and the provision of tablets and other necessary hardware. The total cost under the SOW is $0.2 million. The work under this SOW has been suspended by mutual agreement pending the Company's review of its inhaled trial.

On November 15, 2021, NRx Pharmaceuticals and Pill Tracker entered into a Supplemental Task Order ("STO") amending SOW No. 1, under the MSA. The additional work under the STO focuses on study preparation and custom, software interface buildout of a connected medication adherence and patient-monitoring platform to support participants of the AVICOVID-2 clinical trial of inhaled ZYESAMI in the U.S., and future studies of ZYESAMI with compatible protocol designs. The expected cost of the STO is $0.4 million. The STO has been suspended by mutual agreement pending the Company's review of its inhaled trial.

NRX PHARMACEUTICALS, INC.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

NRx Pharmaceuticals paid PillTracker $0.2 million and $0.1 million during the three months ended March 31, 2022 and 2021, respectively.

Included in accounts payable were less than $0.1 million and $0.1 million due to the above related parties as of March 31, 2022 and December 31, 2021, respectively.

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"), and ZYESAMI® (aviptadil), an intravenous and inhaled drug to treat respiratory failure in COVID-19 and potentially other respiratory disorders.

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 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. 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 P2a 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 current standard of care) in maintaining remission from depression and suicidality following a single stabilizing dose of ketamine. NRx Pharmaceuticals initiated a Phase II SSIB clinical study in the second quarter of 2022 for which enrollment has begun. The Company plans to initiate a Phase III registrational ASIB study in the second half of 2022.

In March 2020, NRx Pharmaceuticals initiated development of RLF-100 (aviptadil acetate) (now reformulated as ZYESAMI by NRx Pharmaceuticals) in partnership with Relief Therapeutics Holding AG ("Relief Therapeutics"). ZYESAMI is based on 50 years of research, pioneered by Professor Sami Said, on the role of Vasoactive Intestinal Peptide/Aviptadil in preventing and treating acute lung injury by protecting the Type II cell in the lung. The rights to Professor Said's scientific work are licensed by the Company from the Research Foundation for the State University of New York.

NRx Pharmaceuticals and Relief Therapeutics entered into a collaboration agreement on September 18, 2020 (the "Collaboration Agreement") for the clinical development and, if approved, the sale of Aviptadil. The Collaboration Agreement provided for funding by Relief Therapeutics of certain clinical trials, formulation and manufacturing of Aviptadil, as well as established sales territories for each party and share of the profits in those territories for "Product" as

defined in the Collaboration Agreement. Relief Therapeutics has reimbursed the Company approximately $10.9 million but has subsequently declined to reimburse the Company for additional costs.

On October 6, 2021, Relief Therapeutics filed a complaint in New York State Court, claiming that the Company failed to honor its obligations under the Collaboration Agreement. Relief Therapeutics' complaint seeks several remedies, including damages for alleged breaches of the terms of the Collaboration Agreement. The Company believes that the claims are baseless and without merit. On January 10, 2022, the Company filed a complaint in New York State Court, claiming Relief Therapeutics breached and repudiated the Collaboration Agreement. The Company's complaint seeks damages of at least $185.0 million. The parties to the lawsuits agreed to engage in mediation in an effort to amicably resolve the litigation. If the mediation does not resolve the dispute, the Company intends to defend itself vigorously and to prosecute its claims against Relief Therapeutics.

In an open-label, single center trial at Houston Methodist Hospital, ZYESAMI demonstrated a statistically significant 9-fold advantage in probability of survival and recovery from respiratory failure compared to the standard of care among patients with COVID-19 respiratory failure.

On March 29, 2021, NRx Pharmaceuticals reported top-line Phase IIb/III study results of ZYESAMI in patients with respiratory failure due to Critical COVID-19. Though it did not meet statistical significance for the pre-specified primary endpoint of "alive and free of respiratory failure" (P=.08), the study identified a two-fold statistically significant odds of survival at day 60 (P=.03), and significant advantages on secondary endpoints, for those treated with ZYESAMI compared to those treated with placebo.

On the basis of these results, the National Institute for Allergy and Infectious Diseases selected NRx Pharmaceuticals as an industry partner for participation in the ACTIV3b/TESICO trial (NCT 04843761) in which patients with Critical COVID-19 are randomized to aviptadil, remdesivir, and placebo. NRx Pharmaceuticals provides doses of aviptadil as the industry partner and the U.S. Government funds all other costs of research. As of March 2022, approximately 465 patients with Critical COVID-19 were enrolled and treated with either aviptadil or placebo. The endpoint of the trial is superiority on an ordinal scale that includes survival and recovery from respiratory failure at 90 days. As of the February 25, 2022 the Data Safety and Monitoring Board ("DSMB") meeting, no unexpected adverse events were identified in association with ZYESAMI and the trial was cleared to continue enrolling. To date, the DSMB has not declared futility of the aviptadil arm of the ACTIV-3b trial, although futility has been declared for all other investigational products selected in the ACTIV-3b trial studying Critical COVID-19 patients. The DSMB is scheduled to review the data again on May 25, 2022. A previously targeted DSMB meeting for end of April was moved to this new date to allow for the vast majority of enrolled patients to have reached 90 days.

NRx Pharmaceuticals applied for FDA Emergency Use Authorization ("EUA") on May 31, 2021. In November 2021, the FDA notified us that it was unable to issue the EUA at that time due to insufficient data regarding the known and potential benefits of ZYESAMI and the known and potential risks of ZYESAMI in patients suffering from critical COVID-19 with respiratory failure. In November 2021, the FDA also declined a request for Breakthrough Therapy designation, mentioning in its reply that the request did not adequately compare the safety and efficacy of aviptadil to existing therapies in Critical COVID-19 patients, such as remdesivir. In response, in February 2022, the Company filed a new request for EUA in patients with COVID-19 respiratory failure who are at immediate risk of death despite treatment with remdesivir and other approved therapies. This new request is based on a post-hoc analysis of the approximately 70% of patients in the randomized study that were also treated with remdesivir and included safety data on approximately 750 patients treated with ZYESAMI in our clinical trials, our Expanded Access Programs, our Right To Try Program and the ACTIV-3b trial. On April 20, 2022, the Company submitted a new Breakthrough Therapy designation request focused on this narrower population of patients that are at immediate risk of death despite treatment with remdesivir. As of the date hereof, these requests are still pending.

Should an EUA be granted, this would provide NRx Pharmaceuticals with a one-year period during which ZYESAMI could be marketed for the treatment of COVID-19 in the United States in advance of the filing a new drug application ("NDA") with the FDA for formal approval of ZYESAMI for the treatment of COVID-19. If authorized for use, we believe ZYESAMI would fill a high unmet need for COVID-19 patients who are critically ill with respiratory failure, as current options have only limited applicability in this patient segment.

Manufacturing and scalability of ZYESAMI are a major focus of the Company. Working with its manufacturing partners, the Company has the capability to produce batch sizes of 1.5kg and potentially larger of the active pharmaceutical ingredient (API) of ZYESAMI. In addition to producing ZYESAMI API at a scale suitable for commercial quantities, the Company has gained insights into how to address the chemical basis for the instability of the formulated drug product ZYESAMI in solution. The Company has now demonstrated a formulation of ZYESAMI with refrigerated stability of up to 8 months and expected multi-year frozen stability (-20°C). In January 2022, the Company filed a Composition of Matter patent application that describes this extended stability form of aviptadil. In the process, the Company has identified specific aspects of the manufacturing process that it believes are key to preserving the stability of aviptadil for stockpiling and commercial supply chain purposes.

On October 8, 2021, the Company submitted an updated manufacturing module to its FDA Investigational New Drug file documenting this change in manufacture and stability. On November 8, 2021, the FDA communicated with the Company that the manufacturing update had been reviewed and that no "clinical hold" items had been identified (this is the regulatory language that allows an investigational product to be given to patients). The Company initiated a parallel manufacturing process to conform to EU and UK standards. In October 2021, the Company announced that a European Qualified Person audit was conducted, and no major deficiencies were identified, thus clearing ZYESAMI's use in EU investigational programs.

Since inception, NRx Pharmaceuticals has incurred significant operating losses. For the three months ended March 31, 2022 and 2021, NRx Pharmaceuticals' net loss was $13.4 million and $25.5 million, respectively. As of March 31, 2022, NRx Pharmaceuticals had an accumulated deficit of $196.7 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 expense consists primarily of salaries, stock-based compensation, consultant fees, and professional fees for legal and accounting services.

Settlement Expense

Settlement expense consists primarily of settlement expenses related to the GEM Warrant. See Note 8 "Commitments and Contingencies – Share Subscription Facility Agreement – GEM" of the notes to the Company's unaudited condensed consolidated financial statements included elsewhere in this report for further information.

Reimbursement of expenses from Relief Therapeutics

Reimbursement of expenses from Relief Therapeutics consists of reimbursable expenses as part of the Collaboration Agreement. See Note 8 "Commitments and Contingencies – Relief Therapeutics Collaboration Agreement" of the notes to the Company's unaudited condensed consolidated financial statements included elsewhere in this report for further information.

Results of operations for the three months ended March 31, 2022 and 2021

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

	Three months ended March 31,		Change
	2022	2021	Dollars
	(Unaudited)		
Operating expenses:			
Research and development	$ 5,483	$ 2,909	$ 2,574
General and administrative	10,222	2,101	$ 8,121
Settlement expense	—	21,366	$ (21,366)
Reimbursement of expenses from Relief Therapeutics	—	(771)	$ 771
Total operating expenses	$ 15,705	$ 25,605	$ (9,900)
Loss from operations	$ (15,705)	$ (25,605)	$ 9,900
Other (income) expenses:			
Gain on extinguishment of debt	—	(121)	$ 121
Interest expense	3	5	$ (2)
Change in fair value of warrant liability	(157)	—	$ (157)
Change in fair value of Earnout Cash liability	(2,103)	—	$ (2,103)
Total other (income) expenses	(2,257)	(116)	$ (2,141)
Net loss	$ (13,448)	$ (25,489)	$ 12,041

Operating expenses

Research and development expenses

For the three months ended March 31, 2022, NRx Pharmaceuticals recorded $5.5 million of research and development expenses compared to $2.9 million for the three months ended March 31, 2021. The increase of $2.6 million related primarily to an increase of $2.1 million in clinical trials and development expenses related to ZYESAMI, an increase of $0.2 million in stock-based compensation expense, and an increase of $0.3 million in other regulatory and process development expenses. The $5.5 million and $2.9 million of research and development expenses for the three months ended March 31, 2022 and 2021, respectively, include $0.2 million and less than $0.1 million, respectively, of non-cash stock-based compensation.

General and administrative expenses

For the three months ended March 31, 2022, NRx Pharmaceuticals recorded $10.2 million of general and administrative expenses compared to $2.1 million for the three months ended March 31, 2021. The increase of $8.1 million was primarily, related to an increase of $4.4 million in legal, professional and accounting fees, an increase of $2.2 million in insurance expense, an increase of $0.8 million in stock-based compensation expense, and an increase of $0.7 million in other general and administrative expense. The $10.2 million and $2.1 million of general and administrative expenses for the three months ended March 31, 2022 and 2021, respectively, include $1.1 million and $0.3 million, respectively, of non-cash stock-based compensation.

Reimbursement of expenses from Relief Therapeutics

For the three months ended March 31, 2022, NRx Pharmaceuticals recorded no reimbursement of expenses from Relief Therapeutics compared to $0.8 million of reimbursement of expenses from Relief Therapeutics for the three months ended March 31, 2021.

Other (income) expenses

Gain on extinguishment of debt

For the three months ended March 31, 2022, NRx Pharmaceuticals recorded no gain on extinguishment of debt compared to $0.1 million for the three months ended March 31, 2021. The decrease of $0.1 million related to the forgiveness of the PPP Loan which resulted in a gain on extinguishment for the outstanding principal and accrued and unpaid interest for the three months ended March 31, 2021.

Change in fair value of warrant liability

For the three months ended March 31, 2022, NRx Pharmaceuticals recorded a gain of $0.2 million related to the change in fair value of the warrant liability. The gain of $0.2 million related to the decrease in the fair value of the Placement Warrants assumed pursuant to the Merger Agreement.

Change in fair value of Earnout Cash liability

For the three months ended March 31, 2022, NRx Pharmaceuticals recorded a gain of $2.1 million related to the change in fair value of the Earnout Cash liability. The gain related to the decrease in the fair value of the Earnout Cash liability pursuant to the Merger Agreement.

Liquidity and Capital Resources

NRx Pharmaceuticals 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 NRx Pharmaceuticals 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 ZYESAMI 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.

NRx Pharmaceuticals believes that it currently has 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.

Private Placement

On February 2, 2022, the Company sold 7,824,727 shares of common stock and preferred investment options to purchase up to an aggregate of 7,824,727 shares of common stock, and received net proceeds of $23.0 million.

Reverse Recapitalization Merger and Subsequent Equity Issuances

Pursuant to the terms of the Merger Agreement, NeuroRx’s securityholders (including option holders and warrant holders) who own NeuroRx securities immediately prior to the Effective Time will have the contingent right to receive their pro rata portion of (i) an aggregate of 25,000,000 shares of Common Stock (“Earnout Shares”) if, prior to December 31, 2022, the NeuroRx COVID-19 Drug (i.e., ZYESAMI) receives emergency use authorization by the Food and Drug Administration (“FDA”) and NeuroRx submits and the FDA files for review a new drug application for the NeuroRx COVID-19 Drug (i.e., ZYESAMI) (the occurrence of the foregoing, the “Earnout Shares Milestone”), and (ii) an aggregate of $100.0 million in cash (“Earnout Cash”) upon the earlier to occur of (x) FDA approval of the NeuroRx COVID-19 Drug (i.e., ZYESAMI) and the listing of the NeuroRx COVID-19 Drug in the FDA’s “Orange Book” and (y) FDA approval of the NeuroRx Antidepressant Drug Regimen (i.e., NRX-100/101) and the listing of the NeuroRx Antidepressant Drug Regimen (i.e., NRX-100/101) in the FDA’s “Orange Book,” in each case prior to December 31, 2022 (the occurrence of either of clauses (x) or (y), the “Earnout Cash Milestone”). If the Earnout Shares Milestone is achieved, the Earnout Shares will be issued within five (5) Business Days after the occurrence of the Earnout Shares Milestone. If the Earnout Cash Milestone is achieved, the Merger Agreement does not require the Earnout Cash to be delivered to NeuroRx securityholders within any specified period of time, and the board of directors of NRx Pharmaceuticals will use its good faith judgment to determine the date to pay the Earnout Cash. At March 31, 2022, the fair value of the Earnout Cash liability has been

estimated to be $2.5 million. Upon closing of the Merger, the estimated fair value of the Earnout Shares was $253.1 million with such amount recognized as a deemed dividend. As the Company is in an accumulated deficit position as of the measurement date, the resulting deemed dividend is recorded as a reduction of additional paid-in capital with a corresponding offset recorded to additional paid-in capital (i.e., net impact to additional paid-in capital of $0). The benefit of the contingent right to receive Earnout Cash for option and warrant holders occurs through the Option Exchange Ratio and therefore the amount of Earnout Cash for common stockholders is approximately $88.8 million.

In connection with the Merger, a number of subscribers (each, a "Subscriber") purchased from the Company an aggregate of 1,000,000 shares of Common Stock (the "PIPE"), for a purchase price of $10.00 per share and an aggregate purchase price of $10.0 million (the "PIPE Shares"), pursuant to separate subscription agreements (each, a "Subscription Agreement") entered into prior to the Closing Date. The Company received $8.1 million in net proceeds after transaction costs from the sale of PIPE Shares.

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

	March 31, 2022 (Unaudited)	December 31, 2021
Balance Sheet Data:		
Cash	$ 40,202	$ 27,605
Total assets	43,601	32,729
Earnout cash liability	2,479	4,582
Total liabilities	11,912	11,923
Total stockholders' equity (deficit)	31,689	20,806

	March 31,	
	2022	2021
	(Unaudited)	
Statement of Cash Flow Data:		
Net cash used in operating activities	$ (10,380)	$ (3,015)
Net cash used in investing activities	(3)	—
Net cash provided by financing activities	22,980	14,427
Net increase in cash	$ 12,597	$ 11,412

Operating activities

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.

During the three months ended March 31, 2021, operating activities used $3.0 million of cash, primarily resulting from a net loss of $25.5 million, reduced by non-cash charges of $21.6 million, including $21.4 million of non-cash settlement expense related to the GEM Warrant, $0.4 million of stock-based compensation expense, partially offset by a gain on extinguishment of debt of $0.1 million; and an increase in net operating assets of $0.9 million.

Financing activities

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.

During the three months ended March 31, 2021, financing activities provided $14.4 million of cash, primarily resulting from $6.9 million of proceeds from the issuance of shares of NeuroRx common stock and $7.5 million of the issuance of NeuroRx common stock for the exercise of the GEM Warrants.

Contractual Obligations and Commitments

See Note 8, Commitments and Contingencies, of the notes to NRx Pharmaceuticals' unaudited condensed consolidated financial statements as of and for the three months ended months ended March 31, 2022 included elsewhere in this report for further discussion of NRx Pharmaceuticals' 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

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

Critical Accounting Policies and Significant Judgments and Estimates

NRx Pharmaceuticals' 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 2 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.

Earnout Cash Liability

The fair value of the Earnout Cash liability has been estimated using probability-weighted discounted cash flow models (DCFs) with significant inputs that are not observable in the market and thus represents a Level 3 fair value measurement as defined in ASC 820. The most significant inputs include whether (a) the FDA approves the Company's NDAs for ZYESAMI and/or NRX-101, (b) if such approval is granted, whether such approval will be received on or before December 31, 2022, and (c) if such approval is granted, whether ZYESAMI and/or NRX-101 will be listed in the FDA's Orange Book on or before December 31, 2022. The DCFs incorporate Level 3 inputs including estimated discount rates that we believe market participants would consider relevant in pricing and the projected timing and amount of cash flows, which are estimated and developed in consideration of the uncertainties associated with the obligations. Changes in the estimated fair value of the Earnout Cash Liability are recognized as a gain or loss in the statements of operations.

Fair value of common and preferred stock

Prior to the Merger, in order to determine the fair value of shares of its common stock, the Company's board of directors considered, among other things, contemporaneous valuations of its common stock and preferred stock based on arms-length transactions with third party investors. Subsequent to the Merger, the Board determines the fair value of the Common Stock based on the closing market price on the date of grant.

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. 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 liability

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, 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.

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

Disclosure controls and procedures are designed to ensure that information required to be disclosed by us in our Exchange Act reports 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 Interim Chief Executive Officer and Chief Financial Officer or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Under the supervision and with the participation of our management, including our Interim Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our disclosure controls and procedures as of the end of the fiscal quarter ended March 31, 2022, as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act. Based on this evaluation, as a result of the material weakness in internal control over financial reporting described below, our Interim Chief Executive Officer and Chief Financial Officer have concluded that during the period covered by this report, our disclosure controls and procedures were not effective as of March 31, 2022.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements would not be prevented or detected on a timely basis. As previously reported in Part II, Item 9A of our Annual Report on Form 10-K for

the year ended December 31, 2021, management identified the lack of segregation of duties in preparing and approving disclosures as a material weakness in our internal control over financial reporting as of December 31, 2021.

We are committed to continuing to improve our internal control over financial reporting. In response to the identified material weakness, our management, with the oversight of the Audit Committee, developed a remediation plan that includes implementation of a Disclosure Committee. On March 30, 2022 the Board of Directors approved the Disclosure Committee Charter. Subsequent to March 31, 2022, and prior to the date hereof, the Disclosure Committee met for the first time. We plan to evaluate the design and operating effectiveness of the Disclosure Committee, and other improvements to the internal control structure, during the remainder of 2022.

(b) Changes in Internal Control Over Financial Reporting

Other than those changes described above, there have been no material changes in internal control over financial reporting since December 31, 2021.

PART II – OTHER INFORMATION

Item 1. Legal Proceedings.

On October 6, 2021, Relief Therapeutics Holding AG ("Relief Therapeutics") filed a complaint (the "Complaint") in New York State Court (the "NYS Court"), claiming that the Company failed to honor its obligations under the collaboration agreement dated September 18, 2020 (the "Collaboration Agreement"). The Complaint seeks several remedies, including damages for alleged breaches of the terms of the Collaboration Agreement. The Company believes that the claims are baseless and without merit. On January 10, 2022, the Company filed a complaint in NYS Court, claiming Relief Therapeutics breached and repudiated the Collaboration Agreement. The Company's complaint seeks damages of at least $185 million. The parties to the lawsuits agreed to engage in mediation in an effort to amicably resolve the litigation. If the mediation does not resolve the dispute, the Company intends to defend itself vigorously and to prosecute its claims against Relief Therapeutics. There can be no assurance, however, that we will be able to successfully resolve the dispute through mediation or that, in the event the dispute continues in litigation, we will be successful in our claims or in our opposition to Relief Therapeutics' claims.

On January 18, 2022, a federal securities class action complaint was filed against the Company, its Chief Executive Officer at the time, Jonathan Javitt, and its former Chief Financial Officer, William Fricker, by purported stockholder Cristian Dal Bosco (the "Dal Bosco Complaint"). The Dal Bosco Complaint alleges that the Company made false or misleading statements or otherwise failed to disclose that the Company's EUA application contained insufficient data regarding the potential benefits and risks of ZYESAMI and, accordingly, the FDA was unlikely to approve it. The Company believes the Dal Bosco Complaint is baseless and without merit and intends to defend itself vigorously. There can be no assurance, however, that the Company will be successful. The Dal Bosco Complaint has led to the filing, and threatened filing, of almost verbatim class action complaints.

In addition to the matters described above, we may become involved in various legal actions incidental to our business. As of the date hereof, 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, 2021 filed with the SEC on March 31, 2022 (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.

(b) Use of Proceeds from Public Offering of Common Stock

On February 2, 2022, the Company completed a Private Placement and issued 7,824,727 shares of Common Stock for a purchase price of $3.195 per share and the Preferred Investment Options to purchase up to an aggregate of 7,824,727 shares of common stock for a purchase price of $3.07 per share from August 2, 2022 through August 2, 2027 (collectively, the "Additional Securities"). The aggregate gross proceeds to the Company from the Private Placement were approximately $25.0 million, before deducting placement agent fees and other offering expenses. In connection with this Private Placement, the Company entered into a Registration Rights Agreement with the purchasers of the Additional Securities. The Company's registration statement on Form S-1 to register the Additional Securities was declared effective on April 19, 2022.

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+	Executive Employment Agreement, dated March 15, 2022, between NRx Pharmaceuticals, Inc. and Ira Strassberg.
10.2	Consulting Agreement by and between NRx Pharmaceuticals, Inc. and Jonathan C. Javitt, dated as of March 8, 2022 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed with the SEC on March 9, 2022).
10.3	Letter Agreement by and between NeuroRx, Inc. and REBes Consulting LLC- Robert Besthof, dated as of March 9, 2022 (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed with the SEC on March 9, 2022).
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, 2022 (Unaudited) and December 31, 2021; (ii) Unaudited Condensed Consolidated Statements of Operations for the three months ended March 31, 2022 and 2021 ; (iii) Unaudited Condensed Consolidated Statements of Changes in Stockholders' Equity (Deficit) for the three months ended March 31, 2022 and 2021; (iv) Unaudited Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2022 and 2021; 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 16, 2022

By: /s/ Ira Strassberg

Name: Ira Strassberg
Title: Chief Financial Officer
(Principal Financial Officer)

Exhibit 10.1

EXECUTIVE EMPLOYMENT AGREEMENT

This Executive Employment Agreement (this "Agreement") is made and entered into by and between NRx Pharmaceuticals, Inc., a Delaware corporation (the "Company") and Ira Strassberg ("Executive") effective as of March 15, 2022.

RECITALS:

WHEREAS, subject to the terms and conditions hereinafter set forth, the Company wishes to employ Executive as its Chief Financial Officer and Treasurer and Executive wishes to accept such employment;

NOW, THEREFORE, in consideration of the foregoing premises and the mutual promises, terms, provisions and conditions set forth in this Agreement, the parties hereby agree:

1. **Employment**. Subject to the terms and conditions set forth in this Agreement, the Company hereby offers, and Executive hereby accepts, employment by the Company as the Company's Chief Financial Officer and Treasurer on the terms and conditions set forth in this Agreement. Executive's primary workplace, as assigned by the Company and per the requirements of the Company, shall be his home in Great Falls, Virginia, and Executive may conduct business from home, including confidential tele/videoconferences and safekeeping of confidential documents. Executive confirms that he is able to do so and that the Company is not liable for any expenses for the maintenance of such home office. Executive is also solely responsible for compliance with local ordinances and payment of any fees that may arise from home office-based work.

2. **Term**. Subject to earlier termination as hereafter provided, this Agreement shall have an original term of Two (2) years commencing on March 15, 2022 (the "Effective Date") and shall be automatically extended thereafter for successive terms of one (1) year each, unless Company provides Executive with notice of non-renewal at least sixty (60) days prior to the expiration of such term or unless Executive's employment with the Company is terminated in accordance with the provisions of Section 5 hereof. The term of this Agreement, as from time to time extended or renewed, is hereafter referred to as "the term of this Agreement" or "the term hereof."

3. **Capacity and Performance**.

(a) During the term hereof, Executive shall serve the Company as its Chief Financial Officer and Treasurer, initially reporting to the Company's Interim Chief Executive Officer or Chief Executive Officer ("CEO") or such other individuals as may be designated by him or by the Board of Directors ("Board") of the Company.

(b) During the term hereof, Executive shall be employed by the Company on a full-time basis and shall perform the duties of his position and such other duties on behalf of the Company, reasonably consistent with his position, as may be designated from time to time by the CEO or the Company's Board.

(c) During the term hereof, Executive shall devote his commercially reasonable full time efforts, business judgment, skill and knowledge to the advancement of the business and interests of the

Company and to the discharge of his duties and responsibilities hereunder. Executive shall not engage in any other business activity that is in conflict to, or competitive with, the Company or its business or with Executive's duties and responsibilities hereunder.

(d) The Company shall provide Executive with the same indemnification rights and liability insurance coverage that it provides to other officers and directors of the Company.

4. **Compensation and Benefits**. As compensation for all services performed by Executive under and during the term hereof and subject to performance of Executive's duties and of the obligations of Executive to the Company pursuant to this Agreement or otherwise:

(a) **Base Salary**. The Company shall pay Executive a base salary at the rate of four hundred thousand dollars ($400,000) per annum (i.e., $33,333.33 per month), payable in accordance with the payroll practices of the Company for its executives and subject to increase from time to time by the Board. Such base salary, as from time to time is increased, is hereafter referred to as the "Base Salary."

(b) **Incentive and Bonus Compensation**. Executive shall be considered annually by the Board for a performance-based bonus (the "Annual Bonus") with a minimum target (the "Target Bonus") of Fifty Percent (50%) of Base Salary (i.e., $200,000 at current Base Salary) at the discretion of the Board and upon satisfactory performance of his duties. The Target Bonus is payable in March of the following year, in accordance with the payroll and bonus practices of the Company.

(c) **Equity Compensation.** Executive shall be awarded a grant of 425,000 options to purchase shares of common stock in the Company under the terms of the Company's 2021 Omnibus Incentive Plan at an exercise price equal to the closing price of the Company's common stock on the effective date of this agreement (the "Options"). The Options shall vest over a two-year period, with 212,500 options vesting on March 15, 2023 and 212,500 options vesting on March 15, 2024.

(d) **Vacations**. Executive shall be entitled to four (4) weeks of vacation a year, to be taken at such times and intervals as shall be determined by Executive, subject to the reasonable business needs of the Company and with the approval of the Company's CEO. Executive shall also be afforded reasonable professional development time to attend Continuing Professional Education seminars in order to maintain the Executive's Certified Public Accountant (CPA) certification in good standing. Vacation shall otherwise be governed by the policies of the Company, as in effect from time to time.

(e) **Other Benefits**. Executive shall be either provided with an employer-sponsored health insurance plan that meets the requirements of the Affordable Care Act (premium payment to be covered by the Company at 80%) OR afforded a supplemental payment equivalent to Executive's health insurance premium under any current COBRA plan in which Executive is enrolled. Executive shall be entitled to participate in employee benefit plans from time to time in effect for US-based employees of the Company generally. Such participation shall be subject to the terms of the applicable plan documents and generally applicable Company policies.

(f) **Business Expenses**. The Company shall pay or reimburse Executive for all reasonable customary business expenses incurred or paid by Executive in the performance of his duties and responsibilities hereunder, subject to any maximum annual limit and other restrictions on such expenses set by the Board and to such reasonable substantiation and documentation as may be specified by the Company from time to time. Such expenses shall include (1) fees for attending Continuing Professional Education seminars in order to maintain Executive's CPA, (2) fees for annual membership in the American Institute of Certified Public Accountants and Institute of Management Accountants, (3)

fees from states of New York, Maryland and the District of Columbia to maintain Executive's CPA certification in those jurisdictions.

5. **Termination of Employment**. Notwithstanding the provisions of Section 2 hereof, Executive's employment hereunder shall terminate prior to the expiration of the term hereof under the following circumstances:

(a) **Death**. In the event of Executive's death during the term hereof, Executive's employment hereunder shall immediately and automatically terminate. In such event, the Company shall pay to Executive's designated beneficiary or, if no beneficiary has been designated by Executive, to his estate, (i) the Base Salary earned but not paid through the date of termination, (ii) pay for any vacation time earned but not used through the date of termination, (iii) any Annual Bonus awarded for the year preceding that in which termination occurs but unpaid on the date of termination and (iv) any business expenses incurred by Executive but not reimbursed on the date of termination, provided that such expenses and required substantiation and documentation are submitted within ninety (90) days of termination and that such expenses are reimbursable under Company policy (all of the foregoing, "Final Compensation"). The Company shall have no further obligation to Executive.

(b) **Disability**.

(i) The Company may terminate Executive's employment hereunder, upon notice to Executive, in the event that Executive becomes disabled during his employment hereunder through any illness, injury, accident or condition of either a physical or psychological nature and, as a result, is unable to perform substantially all of his duties and responsibilities hereunder for ninety (90) days during any period of three hundred and sixty-five (365) consecutive calendar days. In the event of such termination, the Company shall have no further obligation to Executive, other than for payment of Final Compensation.

(ii) The Board of Directors or the CEO may designate another employee to act in Executive's place during any period of Executive's disability. Notwithstanding any such designation, Executive shall continue to receive the Base Salary in accordance with Section 4(a) and benefits in accordance with Section 4(d), to the extent permitted by the then-current terms of the applicable benefit plans until the termination of his employment.

(iii) Should the Company implement a disability income plan for all employees, while receiving disability income payments under the Company's disability income plan Executive shall not be entitled to receive any Base Salary under Section 4(a) hereof, but shall continue to participate in Company benefit plans in accordance with Section 4(d) and the terms of such plans, until the termination of his employment. In the event the disability income payments under the Company's disability income plan during the term hereof are less than Executive's Base Salary, the Company shall pay to Executive, in accordance with Company's standard payroll practices, an amount equal to Executive's Base Salary less the disability income payments.

(iv) If any question shall arise as to whether during any period Executive is disabled through any illness, injury, accident or condition of either a physical or psychological nature so as to be unable to perform substantially all of his duties and responsibilities hereunder, Executive may, and at the request of the Company shall, submit to a medical examination by a physician selected by the Company to whom Executive or his duly appointed guardian, if any, has no reasonable objection to

determine whether Executive is so disabled and such determination shall for the purposes of this Agreement be conclusive of the issue. If such question shall arise and Executive shall fail to submit to such medical examination, the Company's determination of the issue shall be binding on Executive.

(c) **By the Company for Cause**. The Company may terminate Executive's employment hereunder for Cause at any time upon notice to Executive setting forth in reasonable detail the nature of such Cause. The following shall constitute Cause for termination:

(i) Executive's failure to perform (other than by reason of disability), or gross negligence in the performance of, his material duties and responsibilities to the Company. Unauthorized absence of employee for a period of five consecutive business days shall be considered failure to perform as defined above.

(ii) Material breach of Section 7 or 8 hereof or breach of any fiduciary duty owed to the Company;

(iii) Fraud or embezzlement or other dishonesty which is material (monetarily or otherwise) with respect to the Company;

(iv) Indictment, conviction or plea of nolo contendere to a felony or other crime involving moral turpitude that is material to the Company; or

(v) Loss of CPA licensure, disciplinary proceedings, or other events that impair Executive's ability to function as Chief Financial Officer or Treasurer of the Company.

Upon termination of Executive's employment hereunder for Cause, the Company shall have no further obligation to Executive, other than for Final Compensation.

(d) **By the Company Other than Cause or Upon a Change of Control**. The Company may terminate Executive's employment hereunder other than for Cause at any time upon sixty (60) days' notice to Executive or otherwise upon a Change of Control. Should such termination occur after three months of employment, the Company shall provide Executive severance pay equal to the sum of the Base Salary at the rate in effect on the date of termination from the date of termination through the one year anniversary thereof. The Company shall also pay Executive all accrued compensation and prorated Target Bonus through the date of termination and shall immediately vest all unvested Equity Compensation, which shall then become fully exercisable. Any obligation of the Company to Executive hereunder is conditioned, however, on Executive signing a timely and effective release of claims ("Employee Release"). The first installment of the severance pay shall be due and payable at the Company's next regular payday which is at least five (5) business days following the later of the effective date of the Employee Release or the date the Employee Release, signed by Executive, is received by the Company, but shall be retroactive to the next business day following the date of termination.

(e) **By Executive other than for Good Reason**. Executive may terminate his employment hereunder at any time upon sixty (60) days' notice to the Company; provided, however, that the Company may elect to waive all or any portion of such notice, in which event the Company will pay Executive the Base Salary for any portion of the first sixty (60) days of such notice waived. The Company shall have no further obligation to Executive, other than for any Final Compensation due to him.

(f) **By Executive for Good Reason.** Executive may terminate his employment hereunder for Good Reason which for the purposes of this Agreement shall mean (i) material diminution of Executive's compensation or benefits; (ii) material diminution of Executive's title, duties, authority or responsibilities; (iii) the Company's material breach of any term of this Agreement; or (iv) the relocation of Executive's place of employment to a location that is more than 20 miles from his home. In order for Executive to terminate his employment for Good Reason, Executive must give the Company at least thirty (30) days' notice of Good Reason and an opportunity to cure the Good Reason within such period. Should such termination occur after three months of employment, the Company shall provide Executive severance pay equal to the sum of the Base Salary at the rate in effect on the date of termination from the date of termination through the one-year anniversary thereof. The Company shall also pay Executive all accrued compensation and prorated Target Bonus through the date of termination and shall immediately vest all unvested Equity Compensation, which shall then become fully exercisable. Any obligation of the Company to Executive hereunder is conditioned, however, on Executive signing a timely and effective release of claims ("Employee Release"). The first installment of the severance pay shall be due and payable at the Company's next regular payday which is at least five (5) business days following the later of the effective date of the Employee Release or the date the Employee Release, signed by Executive, is received by the Company, but shall be retroactive to the next business day following the date of termination.

6. **Effect of Termination**. The provisions of this Section 6 shall apply to any termination, whether due to the expiration of the term hereof, pursuant to Section 5 or otherwise.

(a) Payment by the Company of any amounts that may be due Executive in each case under the applicable termination provision of Section 5 shall constitute the entire obligation of the Company to Executive.

(b) Except for any right to continue participation in any employer-sponsored health plan, at Executive's cost under COBRA or other applicable law, Executive's participation in other Company benefits shall terminate pursuant to the terms of the applicable benefit plans based on the date of termination of Executive's employment, without regard to any continuation of Base Salary or other payment to Executive following such date of termination.

(c) Provisions of this Agreement shall survive any termination if so provided herein or if necessary or desirable to accomplish the purposes of other surviving provisions, including without limitation the obligations of Executive under Sections 7, 8 and 9 hereof. The obligations of the Company under Sections 5(d), 5(e) and 5(f) hereof are expressly conditioned upon Executive's continued full performance of obligations under Sections 7, 8 and 9 hereof. Executive recognizes that, except as expressly provided in Section 5(d), 5(e) or 5(f), no compensation is earned after termination of employment.

7. **Confidential Information**.

(a) Executive acknowledges that the Company continually develops Confidential Information; that Executive may develop Confidential Information for the Company; and that Executive may learn of Confidential Information during the course of employment. Executive will comply with the policies and procedures of the Company for protecting Confidential Information and shall not disclose to any Person or use, other than as required by applicable law or for the proper performance of his duties and responsibilities to the Company, any Confidential Information obtained by Executive incident to his employment or other association with the Company. Executive understands that this restriction

shall continue to apply after his employment terminates, regardless of the reason for such termination, for a period of three (3) years. Further, Executive agrees to provide prompt notice to the Company of any required disclosure of Confidential Information sought pursuant to subpoena, court order or any other legal requirement and to provide the Company a reasonable opportunity to seek protection of the Confidential Information prior to any such disclosure.

(b) All documents, records, tapes and other media of every kind and description relating to the business, present or otherwise, of the Company and any copies, in whole or in part, thereof (the "Documents"), whether or not prepared by Executive, shall be the sole and exclusive property of the Company. Executive shall safeguard all Documents and shall surrender to the Company at the time his employment terminates, or at such earlier time or times as the Board may specify, all Documents then in Executive's possession or control.

8. **Assignment of Rights to Intellectual Property**. Executive agrees to maintain accurate and complete contemporaneous records of, and shall immediately and fully disclose and deliver to the Company, all Intellectual Property, as defined below. Executive hereby assigns and agrees to assign to the Company (or as otherwise directed by the Company) his full right, title and interest in and to all Intellectual Property. Executive agrees to execute any and all applications for domestic and foreign patents, copyrights and other proprietary rights and do such other acts (including, among others, the execution and delivery of instruments of further assurance or confirmation) requested by the Company to assign the Intellectual Property to the Company and to permit the Company to enforce any patents, copyrights and other proprietary rights in the Intellectual Property. Executive will not charge the Company for time spent in complying with these obligations. All copyrightable works that Executive creates shall be considered "work made for hire" and shall, upon creation, be owned exclusively by the Company.

9. **Restricted Activities**. Executive agrees that some restrictions on his activities during and after his employment are necessary to protect the goodwill, Confidential Information and other legitimate interested of the Company:

(a) While Executive is employed by the Company and for the twelve (12) months immediately following termination of his employment (in the aggregate, the "Non-Competition Period"), Executive shall not, directly or indirectly, whether as owner, partner, investor, consultant, agent, employee, joint venturer or otherwise, compete with the Company within any area of the world where Company is doing business (the "Restricted Area"). Specifically, Executive agrees not to engage in any manner in any activity that is directly competitive with the business of the Company as conducted at the time of Executive's departure from the Company. For the purposes of this Section 9, the business of the Company shall include:

(i) development and distribution of Aviptadil and/or other peptide drugs to treat Acute Respiratory Distress Syndrome (ARDS), particularly ARDS arising from or in conjunction with an infectious disease including but not limited to COVID-19;

(ii) development and distribution of NMDA, Glutamine/Glutamate, and GABA-targeted drugs to treat psychiatric conditions, and/or an indication or a claim involving the treatment of depression, PTSD, or reduction of suicidal ideation; and

(iii) development of any drug involving suicidal ideation or in which suicidal ideation is a substantial part of the clinical program.

(b) Executive agrees that during his employment with the Company, he will not undertake

any outside activity, whether or not competitive with the business of the Company, that could reasonably give rise to a conflict of interest or otherwise interfere with his duties and obligations to the Company.

(c) Executive further agrees that during the Non-Competition Period, Executive will not hire or attempt to hire any employee or contractor of the Company, assist in such hiring by any person, or encourage any such employee to terminate his or his relationship with the Company; provided, however, that the foregoing will not apply to any employee that has terminated his employment relationship with the Company at least six (6) months prior to the date on which Executive's employment relationship with the Company is terminated.

(d) Executive further agrees that during the Non-Competition Period, Executive will not solicit any customer or vendor of the Company to terminate or diminish its relationship with them, or, in the case of a customer, to conduct with any Person any business or activity which such customer conducts immediately prior to Executive's departure with the Company.

10. **Section 409A of the Code**. Anything to the contrary herein notwithstanding, all benefits or payments provided by the Company to Executive that would be deemed to constitute "nonqualified deferred compensation" within the meaning of Section 409A of the Internal Revenue Code ("Section 409A") are intended to comply with Section 409A and, in the event that any such benefit or payment is deemed to not comply with Section 409A, the Company and Executive agree to renegotiate in good faith any such benefit or payment so that either (i) Section 409A will not apply or (ii) compliance with Section 409A will be achieved, provided, however, that any resulting renegotiated terms shall provide to Executive, to the extent reasonably practicable, the after-tax economic equivalent based on what otherwise would have been provided to Executive pursuant to the terms of this Agreement. Notwithstanding the above, if Executive qualifies as a "specified employee," as defined in Section 409A, incurs a separation from service for any reason other than death and becomes entitled to a distribution under this Agreement, then to the extent required by Section 409A, no distribution otherwise payable to such specified employee during the first six (6) months after the date of such separation from service, shall be paid to such specified employee until the date which is one day after the date which is six (6) months after the date of such separation from service (or, if earlier, the date of death of the specified employee).

11. **Enforcement of Covenants**. Executive acknowledges that he has carefully read and considered all the terms and conditions of this Agreement, including the restraints imposed upon him pursuant to Sections 7, 8 and 9 hereof. Executive agrees that those restraints are necessary for the reasonable and proper protection of the Company and that each and every one of the restraints is reasonable in respect to subject matter, length of time and geographic area. Executive further acknowledges that, were he to breach any of the covenants contained in Sections 7, 8 or 9 hereof, the damage to the Company would be irreparable. Executive therefore agrees that the Company, in addition to any other remedies available to it, shall be entitled to seek preliminary and permanent injunctive relief against any breach or threatened breach by Executive of any of said covenants, without having to post bond. The parties further agree that, in the event that any provision of Section 7, 8 or 9 hereof shall be determined by a court of competent jurisdiction to be unenforceable by reason of its being extended over too great a time, too large a geographic area or too great a range of activities, such provision shall be deemed to be modified to permit its enforcement to the maximum extent permitted by law.

12. **Conflicting Agreements**. Executive hereby represents and warrants that the execution of this Agreement and the performance of his obligations hereunder will not breach or be in conflict with

any other agreement to which Executive is a party or is bound and that Executive is not now subject to any covenants against competition or similar covenants or any court order or other legal obligation that would affect the performance of his obligations hereunder. Executive will not disclose to or use on behalf of the Company any proprietary information of a third party without such party's consent.

13. **Definitions**. Words or phrases which are initially capitalized or are within quotation marks shall have the meanings provided in this Section and as provided elsewhere herein. For purposes of this Agreement, the following definitions apply:

(a) "Change of Control" means (i) any change in the Company's ownership occurring when any person or company, directly or indirectly, becomes the beneficial owner of voting equity shares of the entity (to the extent of more than 50 percent of the voting shares or the rights to acquire such shares; (ii) any direct or indirect sale or transfer of substantially all of the assets of the Company; (iii) a plan of Company liquidation or an agreement for the sale on liquidation is legally approved and completed; or (iv) the board or empowered managing committee determines and declares that a change of control has occurred, irrespective of any occurrences described above.

(b) "Confidential Information" means any and all information of the Company that is not generally known by Persons with whom the Company competes or does business, or with whom the Company plans to compete or do business and any and all information, publicly known in whole or in part or not, which, if disclosed by the Company would assist in competition against the Company. Confidential Information includes without limitation such information relating to (i) the development, research, testing, manufacturing, marketing and financial activities of the Company, (ii) the Company's products and services, (iii) the costs, sources of supply, financial performance and strategic plans of the Company, (iv) the identity and special needs of the customers of the Company and (v) the people and organizations with whom the Company has a business relationship and the nature and substance of those relationships. Confidential Information also includes any information that the Company has received, or may receive hereafter, belonging to customers or others with any understanding, express or implied, that the information would not be disclosed. Notwithstanding anything to the contrary, Confidential Information will not include (i) any information that has been published in a form generally available to the public or within the trade or industry prior to the date the Executive proposes to disclose or use such information, (ii) any information that the Executive is legally required to disclose, or (iii) any information that is or becomes available to the Executive on a non-confidential basis from a source other than the Executive or an employee or a contractor of the Company; provided that such source is not known by the Executive to be bound by a confidentiality agreement with, or other contractual legal or fiduciary obligation to the Company.

(c) "Intellectual Property" means any invention, formula, process, discovery, development, design, innovation or improvement (whether or not patentable or registrable under copyright statutes) made, conceived, or first actually reduced to practice by Executive, solely or jointly with others, during his employment by the Company.

(d) "Person" means an individual, a corporation, a limited liability company, an association, a partnership, an estate, a trust and any other entity or organization, other than the Company.

13. **Withholding**. All payments made by the Company under this Agreement shall be reduced by any tax or other amounts required to be withheld by the Company under applicable law.

14. **Assignment**. Neither the Company nor Executive may make any assignment of this Agreement or any interest herein, by operation of law or otherwise, without the prior written consent

of the other; provided, however, that the Company may assign its rights and obligations under this Agreement without the consent of Executive in the event that the Company shall hereafter affect a reorganization, consolidate with, or merge into, any Person or transfer all or substantially all of its properties or assets to any Person. This Agreement shall inure to the benefit of and be binding upon the Company and Executive, their respective successors, executors, administrators, heirs and permitted assigns.

15. **Severability**. If any portion or provision of this Agreement shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

16. **Waiver**. No waiver of any provision hereof shall be effective unless made in writing and signed by the waiving party. The failure of either party to require the performance of any term or obligation of this Agreement, or the waiver by either party of any breach of this Agreement, shall not prevent any subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

17. **Notices**. Any and all notices, requests, demands and other communications provided for by this Agreement shall be in writing and shall be effective when delivered in person, consigned to a reputable national delivery service or deposited in the United States mail, postage prepaid, registered or certified, and addressed to Executive at his last known address on the books of the Company or, in the case of the Company, at its principal place of business, attention of the Chairman, or to such other address as either party may specify by notice to the other actually received.

18. **Entire Agreement**. This Agreement constitutes the entire agreement between the parties and supersedes all prior communications, agreements and understandings, written or oral, with respect to the terms and conditions of Executive's employment.

19. **Amendment**. This Agreement may be amended or modified only by a written instrument signed by Executive and by an expressly authorized representative of the Company.

20. **Headings**. The headings and captions in this Agreement are for convenience only and in no way define or describe the scope or content of any provision of this Agreement.

21. **Counterparts**. This Agreement may be executed in two or more counterparts, each of which shall be an original and all of which together shall constitute one and the same instrument.

22. **Governing Law**. This is a Delaware contract and shall be construed and enforced under and be governed in all respects by the laws of the State of Delaware, without regard to the conflict of laws principles thereof.

23. **Consent to Jurisdiction**. Each of the parties agrees that all actions, suits or proceedings arising out of or based upon this Agreement or the subject matter hereof shall be brought and maintained in any state or federal court in or of the State of Delaware; provided, however, that the Company also may bring any such action, suit or proceeding against Executive in any other jurisdiction in which Executive is subject to personal jurisdiction. Each of the parties hereto by execution hereof (i) hereby irrevocably submits to such jurisdiction for the purpose of any action, suit

or proceeding arising out of or based upon this Agreement or the subject matter hereof and (ii) hereby waives to the extent not prohibited by applicable law, and agrees not to assert, by way of motion, as a defense or otherwise, in any such action, suit or proceeding, any claim that he or it is not subject personally to the jurisdiction of the above-named courts; that he or it is immune from extraterritorial injunctive relief or other injunctive relief; that his or its property is exempt or immune from attachment or execution; that any such action, suit or proceeding may not be brought or maintained in one of the above-named courts; that any such action, suit or proceeding brought or maintained in one of the above-named courts should be dismissed on grounds of *forum non conveniens*, should be transferred to any court other than one of the above-named courts, should be stayed by virtue of the pendency of any other action, suit or proceeding in any court other than one of the above-named courts, or that this Agreement or the subject matter hereof may not be enforced in or by any of the above-named courts. Each of the parties hereto hereby consents to service of process in any such suit, action or proceeding in any manner permitted by the laws of the State of Delaware or such other jurisdiction in which the Company may bring an action hereunder; agrees that service of process by registered or certified mail, return receipt requested, at the address specified in or pursuant to Section 18 is reasonably calculated to give actual notice; and waives and agrees not to assert by way of motion, as a defense or otherwise, in any such action, suit or proceeding any claim that service of process made in accordance with Section 16 does not constitute good and sufficient service of process. The provisions of this Section 22 shall not restrict the ability of any party to enforce in any court any judgment obtained in a federal or state court of the State of Delaware.

IN WITNESS WHEREOF, this Agreement has been executed as a sealed instrument by the Company, by its duly authorized representative, and by Executive, as of the date first above written.

NRx Pharmaceuticals, Inc.	**Executive**
By: /s/ Alessandra Daigneault	By: /s/s Ira Strassberg
Name: Alessandra Daigneault	Name: Ira Strassberg
Title: General Counsel	

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, Robert Besthof, Interim 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 16, 2022

/s/ Robert Besthof
Robert Besthof
Interim 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, Ira Strassberg, 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 16, 2022

/s/ Ira Strassberg
Ira Strassberg
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, 2022 (the "Report") by NRx Pharmaceuticals, Inc. (the "Registrant"), I, Robert Besthof, as Interim 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 16, 2022

/s/ Robert Besthof
Robert Besthof
Interim 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, 2022 (the "Report") by NRx Pharmaceuticals, Inc. (the "Registrant"), I, Ira Strassberg, 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 16, 2022

/s/ Ira Strassberg
Ira Strassberg
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.