
**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: **September 30, 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
(State or other jurisdiction of
incorporation or organization)

82-2844431
(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:

<u>Title of each class:</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered:</u>
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 November 13, 2022, the registrant had 67,641,314 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)

	September 30, 2022 (Unaudited)	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 18,249	\$ 27,605
Prepaid expenses and other current assets	6,552	5,109
Total current assets	24,801	32,714
Other assets	23	15
Total assets	<u>\$ 24,824</u>	<u>\$ 32,729</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 2,168	\$ 3,687
Accrued and other current liabilities	5,067	2,375
Accrued clinical site costs	751	469
Earnout Cash liability	—	4,582
Warrant liabilities	56	292
Note payable and accrued interest	—	518
Total liabilities	<u>\$ 8,042</u>	<u>\$ 11,923</u>
Preferred stock, \$0.001 par value, 50,000,000 shares authorized; 0 shares issued and outstanding at September 30, 2022 and December 31, 2021, respectively		
	—	—
Common stock, \$0.001 par value, 500,000,000 shares authorized; 67,641,314 and 58,810,550 shares issued and outstanding at September 30, 2022 and December 31, 2021, respectively		
	68	59
Additional paid-in capital	229,470	203,990
Accumulated deficit	<u>(212,756)</u>	<u>(183,243)</u>
Total stockholders' equity	16,782	20,806
Total liabilities and stockholders' equity	<u>\$ 24,824</u>	<u>\$ 32,729</u>

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		Nine months ended	
	September 30,		September 30,	
	2022	2021	2022	2021
Operating expenses:				
Research and development	\$ 4,129	\$ 6,276	\$ 12,571	\$ 13,844
General and administrative	5,012	13,823	21,876	28,382
Settlement expense	—	—	—	21,366
Reimbursement of expenses from Relief Therapeutics	—	—	—	(771)
Total operating expenses	9,141	20,099	34,447	62,821
Loss from operations	(9,141)	(20,099)	(34,447)	(62,821)
Other (income) expenses:				
Gain on extinguishment of debt	—	—	—	(121)
Interest income	(95)	—	(119)	—
Interest expense	—	5	3	16
Change in fair value of warrant liabilities	37	16,537	(236)	(823)
Change in fair value of Earnout Cash liability	—	408	(4,582)	763
Total other (income) expenses	(58)	16,950	(4,934)	(165)
Net loss	(9,083)	(37,049)	(29,513)	(62,656)
Deemed dividend	—	—	—	(255,822)
Net loss attributable to common stockholders	\$ (9,083)	\$ (37,049)	\$ (29,513)	\$ (318,478)
Net loss per share:				
Basic	\$ (0.14)	\$ (0.72)	\$ (0.45)	\$ (1.45)
Diluted	\$ (0.14)	\$ (0.72)	\$ (0.45)	\$ (1.45)
Net loss per share attributable to common stockholders:				
Basic	\$ (0.14)	\$ (0.72)	\$ (0.45)	\$ (7.36)
Diluted	\$ (0.14)	\$ (0.72)	\$ (0.45)	\$ (7.36)
Weighted average common shares outstanding:				
Basic and diluted	66,449,593	51,739,452	65,532,409	43,290,675

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

NRX PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)
(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
Additional issuance costs in connection with Private Placement	—	—	(342)	—	(342)
Stock-based compensation	—	—	987	—	987
Net loss	—	—	—	(6,982)	(6,982)
Balance - June 30, 2022	66,641,314	\$ 67	\$ 228,958	\$ (203,673)	\$ 25,352
Additional issuance costs in connection with Private Placement	—	—	(28)	—	(28)
Restricted stock awards granted	1,000,000	1	(1)	—	—
Stock-based compensation	—	—	541	—	541
Net loss	—	—	—	(9,083)	(9,083)
Balance - September 30, 2022	67,641,314	\$ 68	\$ 229,470	\$ (212,756)	\$ 16,782

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

	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
Common stock issued	71,056	—	1,562	—	1,562
Effect of Merger and recapitalization, net of redemptions and issuance costs of \$1,413	2,529,730	4	(64,840)	—	(64,836)
Common stock issued pursuant to PIPE financing, net of issuance costs of \$1,900	1,000,000	1	8,099	—	8,100
Common stock issued for advisor services	200,000	—	4,850	—	4,850
Modification of option awards pursuant to Merger	—	—	1,014	—	1,014
Modification of warrants pursuant to Merger	—	—	2,331	—	2,331
Stock-based compensation	—	—	938	—	938
Net loss	—	—	—	(117)	(117)
Balance - June 30, 2021	48,603,585	\$ 49	\$ 75,970	\$ (115,786)	\$ (39,767)
Common stock issued	511,065	—	1,134	—	1,134
Common stock and warrants issued in private placement, net of issuance costs of \$3,669	2,727,273	3	27,356	—	27,359
Issuance of common stock for exercise of warrants and Unit Purchase Options	2,334,370	2	47,317	—	47,319
Common stock issued for consulting services	634,045	1	7,925	—	7,926
Stock-based compensation	—	—	1,560	—	1,560
Net loss	—	—	—	(37,049)	(37,049)
Balance - September 30, 2021	54,810,338	\$ 55	\$ 161,262	\$ (152,835)	\$ 8,482

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)

	Nine months ended September 30,	
	2022	2021
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	\$ (29,513)	\$ (62,656)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	3	2
Stock-based compensation	2,862	6,215
Gain on extinguishment of debt	—	(121)
Change in fair value of warrant liabilities	(236)	(823)
Change in fair value of Earnout Cash liability	(4,582)	763
Non-cash interest expense	—	15
Non-cash settlement expense	—	21,366
Non-cash consulting expense	—	12,776
Changes in operating assets and liabilities:		
Account receivable	—	831
Prepaid expenses and other assets	(1,443)	(6,050)
Accounts payable	(1,519)	1,854
Accrued expenses and other liabilities	2,991	(595)
Net cash used in operating activities	(31,437)	(26,423)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of computer equipment	(11)	(7)
Net cash used in investing activities	(11)	(7)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of common stock for exercise of warrant	—	16,699
Effect of Merger, net of transaction costs	—	11,050
Proceeds from issuance of common stock and exercise of stock options, net of transaction costs	—	9,624
Repayment of note payable	(518)	—
Proceeds from issuance of common stock and warrants issued in private placement, net of issuance costs	22,610	27,359
Repayment of notes payable assumed in Merger	—	(1,100)
Repayment of notes payable - related party	—	(177)
Net cash provided by financing activities	22,092	63,455
Net (decrease) increase in cash and cash equivalents	(9,356)	37,025
Cash and cash equivalents at beginning of period	27,605	1,859
Cash and cash equivalents at end of period	\$ 18,249	\$ 38,884
Supplemental disclosure of cash flow information:		
<i>Non-cash investing and financing activities</i>		
Reclassification of settlement liability upon issuance of warrant	\$ —	\$ 60,852
Reclassification of legacy NeuroRx warrants to warrant liabilities	\$ —	\$ 38,220
Reclassification of warrant liability upon exercise of warrant	\$ —	\$ 38,120
Issuance of common stock warrants as offering costs	\$ 726	\$ 1,027
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.

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

2. Liquidity

As of September 30, 2022, the Company had \$18.2 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 November 4, 2022, the Company issued a 9% redeemable promissory note (the “Note”) to Streeterville Capital, LLC, a Utah limited liability company, for an aggregate principal amount of \$11,020,000. The Company intends to use the proceeds from such issuance for general corporate purposes. The Note matures 18 months from the date of issuance subject to certain acceleration provisions as noted below. The Note carries an original issue discount of \$1,000,000 which was deducted from the principal balance of the Note. The net proceeds from the issuance of the Note was \$10,000,000 after transaction costs including the original issue discount, legal and other fees are included.

The Company has the option to prepay the Note during the term by paying an amount equal to 110% of the principal, interest, and fees owed as of the prepayment date. The noteholder has the right to redeem up to \$1,000,000 of the outstanding balance of the Note per month starting on the six-month anniversary of the issue date. Upon any redemption, the Company may make payments at its option in: (i) in cash, (ii) by paying the redemption amount in the form of shares of Common Stock with the number of redemption shares being equal to the portion of the applicable redemption amount divided by the Redemption Conversion Price (as defined below), or (iii) a combination of cash and shares of common stock. The “Redemption Conversion Price” on any given redemption date equals 85% multiplied by the average of the two lowest daily volume weighted average prices per share of the common stock during the ten trading days immediately preceding the date that the noteholder delivers notice electing to redeem a portion of the Note. Beginning May 1, 2023, in the event (a) the daily dollar trading volume of the common stock of the Company on any given trading day is at least fifty percent (50%) greater than the lower of (i) the median daily dollar trading volume over the previous ten (10) trading days or (ii) the daily dollar trading volume on the trading day immediately preceding the date of measurement or (b) if the closing trade price on any given trading day is at least thirty percent (30%) greater than the Nasdaq Minimum Price, then lender will be entitled to redeem over the following ten (10) trading days an amount of indebtedness then outstanding under the Note equal to twice (2x) the monthly redemption amount of \$1,000,000 solely by payment by stock, if permitted under the agreement, subject to maximum percentage and other ownership limitations.

The Company's ongoing clinical activities continue to generate losses and net cash outflows from operations. Accordingly, the Company issued the above Note to continue to fund its research activities. 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.

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

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

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity of three months or less at the time of initial purchase to be cash equivalents, including balances held in the Company's money market accounts. The Company maintains its cash and cash equivalents with financial institutions, in which balances from time to time may exceed the U.S. federally insured limits. The objectives of the Company's cash management policy are to safeguard and preserve funds to maintain liquidity sufficient to meet the Company's cash flow requirements, and to attain a market rate of return.

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. For restricted stock awards, the grant date fair value is the fair market value per share as of the grant date based on the closing trading price for the Company's stock. The 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.

Modification of stock options and warrants

A change in any of the terms or conditions of stock options and warrants is accounted for as a modification. For a Type 1 (probable-to-probable) modification, incremental stock-based compensation cost is measured as the excess, if any, of the fair value of the modified option/warrant over the fair value of the original option/warrant immediately before its terms are modified, measured based on the fair value of the shares and other pertinent factors at the modification date. For vested stock options and warrants to board members, we recognize incremental compensation cost in the period the modification occurs. For unvested stock options, we recognize 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. If the fair value of the modified option is lower than the fair value of the original option immediately before modification, the minimum compensation cost we recognize is the cost of the original award. The accounting for incremental fair value of warrants is based on the specific facts and circumstances related to the modification which may result in a reduction of additional paid-in capital, recognition of costs for services rendered, or recognized as a deemed dividend.

Warrants

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

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

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 September 30,		Nine Months Ended September 30,	
	2022	2021	2022	2021
Stock options	2,654,579	2,388,811	2,654,579	2,388,811
Restricted stock awards	1,000,000	—	1,000,000	—
Common stock warrants	17,521,753	9,305,790	17,521,753	9,305,790
Earnout Shares	22,209,280	22,209,280	22,209,280	22,209,280
Earnout Shares from exercised Substitute Options and Substitute Warrants	1,229,925	1,229,925	1,229,925	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. There are 1,000,000 unvested restricted stock awards which are excluded from the weighted average shares outstanding for computing EPS until such shares become vested.

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 nine-months ended September 30, 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 consisted 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 shares (the "Exchange Ratio").

In addition, the stockholders of NeuroRx who owned 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 was converted into the right to receive a pro rata portion of the contingent right to receive a pro rata portion of the Earnout Shares and Earnout Cash after consideration of the Substitute Options and Substitute Warrants (as further discussed below).

Pursuant to the terms of the Merger Agreement, NeuroRx's stockholders who owned NeuroRx securities immediately prior to the Effective Time would have the contingent right to receive their pro rata portion of (i) an aggregate of up to 25,000,000 shares of Common Stock ("Earnout Shares"), less 935,608 and 1,920,492, respectively, which are subject to the terms and conditions of the Substitute Options and Substitute Warrants (each as defined below), 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 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 deemed dividend at the Closing Date and a contingent liability measured at its estimated fair value at the Closing Date and will be remeasured at fair value each period end thereafter until earned or December 31, 2022 (see Note 11). The Earnout Shares Milestone was recognized as a deemed dividend at the Closing date and was classified within equity (see Note 11). The benefit of the contingent right to receive Earnout Cash and Earnout Shares for option and warrant holders occurs through the Option Exchange Ratio (as defined below) and therefore the amount of Earnout Shares and Earnout Cash for common stockholders is approximately 22,209,280 shares and \$88.8 million, respectively.

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 would continue to be governed by substantially the same terms and conditions, including vesting, as were applicable to the original instruments.

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 automatically adjusted based on the Merger Agreement 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 such 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.

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

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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 following table reconciles the elements of the Merger to the Unaudited Condensed Consolidated Statement of Cash Flows for the nine months ended September 30, 2021 (in thousands):

	Recapitalization
Cash - BRPA trust and cash, net of redemptions	\$ 4,363
Cash - PIPE financing, net of transaction costs	8,100
Less: transaction costs and advisory fees allocated to NRXP equity	(1,413)
Effect of Merger, net of redemptions and transaction costs	<u>\$ 11,050</u>

The following table reconciles the elements of the Merger to the Unaudited Condensed Consolidated Statement of Changes in Stockholders’ Equity (Deficit) for the nine months ended September 30, 2021 (in thousands):

	Recapitalization
Cash - BRPA trust and cash, net of redemptions	\$ 4,363
Non-cash net working capital assumed from BRPA	(962)
Less: notes payable assumed from BRPA	(1,100)
Less: fair value of assumed Placement Warrants	(1,984)
Less: fair value of legacy NeuroRx Warrants	(38,220)
Less: fair value of Earnout Cash	(25,520)
Less: transaction costs and advisory fees allocated to NRXP equity	(1,413)
Effect of Merger, net of redemptions and transaction costs	<u>\$ (64,836)</u>

The following table details the number of shares of common stock issued immediately following the consummation of the Merger:

	Number of Shares
Common stock, outstanding prior to Merger	552,412
Less: redemption of BRPA shares	(216)
Common stock of BRPA	552,196
BRPA Founder and private shares, net of forfeited shares of 875,216	1,260,284
Shares issued in PIPE Financing	1,000,000
Shares issued for services	200,000
Shares issued pursuant to conversion of Public and Private Rights	717,250
Merger and PIPE financing shares - common stock	3,729,730
NeuroRx shares - common stock (1)	44,873,855
Total shares of common stock immediately after Merger	<u>48,603,585</u>

- (1) The number of NeuroRx common stock was determined from the 14,200,586 shares of NeuroRx common stock outstanding immediately prior to the closing of the Merger converted at the Exchange Ratio. All fractional shares were rounded down.

5. Prepaid Expenses and Other Current Assets

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

	<u>September 30, 2022</u>	<u>December 31, 2021</u>
	<u>(Unaudited)</u>	
Prepaid expenses and other current assets:		
Prepaid insurance	\$ 4,853	\$ 3,224
Other prepaid expenses	555	345
Receivable due from manufacturer	547	—
Prepaid clinical development expenses	316	512
Prepaid legal expenses	281	—
Prepaid manufacturing expenses	—	1,028
Total prepaid expenses and other current assets	<u>\$ 6,552</u>	<u>\$ 5,109</u>

6. Accrued and Other Current Liabilities

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

	<u>September 30, 2022</u>	<u>December 31, 2021</u>
	<u>(Unaudited)</u>	
Accrued and other current liabilities:		
Accrued research and development expenses	\$ 1,624	\$ 1,055
Accrued employee expenses	554	456
Professional services	264	743
Other accrued expenses	2,625	121
Total accrued and other current liabilities	<u>\$ 5,067</u>	<u>\$ 2,375</u>

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 was bearing interest at 2% per annum payable in arrears. The Relief Therapeutics Loan principal and accrued interest were paid in full on April 6, 2022 in the amount of \$0.5 million and less than \$0.1 million, respectively.

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 September 30, 2022 and 2021 was less than \$0.1 million and less than \$0.1 million, respectively, and for the nine months ended September 30, 2022 and 2021 was less than \$0.1 million and \$0.1 million, respectively.

Sponsored Research Agreement with National Jewish Health

On February 8, 2021, the Company entered into a Sponsored Research Agreement (“Research Agreement”) with National Jewish Health (“NJ Health”), a Colorado not-for-profit institution. Under the terms of the Research Agreement, the Company agreed to sponsor a research study at NJ Health relating to the impact of the Company’s’ Aviptadil on propagation of SARS-CoV-2 in alveolar type II cells in vitro (the “Study”). In return for performance of the Study under the Research Agreement, the Company has committed to pay NJ Health approximately \$0.4 million upon finalization of the work. As of September 30, 2022, the Company has paid NJ Health \$0.3 million of the total committed amount.

Relief Therapeutics Collaboration Agreement

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

On November 12, 2022, the Company and Relief Therapeutics entered into a Settlement Agreement and an Asset Purchase Agreement (“APA”), which are intended to resolve the parties’ claims. The parties have thirty (30) days to implement the terms of the Settlement Agreement and APA and achieve closing. Upon closing, the parties will dismiss their respective claims. *Please See Section 14 - Subsequent Events for a description of the settlement arrangements.*

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

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

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

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

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

NeuroRx was required to register the Initial Exercised Shares on (a) the same registration statement on Form S-4 (or such other registration statement, if changed) in connection with the Merger, or (b) such other registration statement in connection with any other transaction which results in a public listing of NeuroRx. In addition, no later than 90 days following the consummation of the Big Rock merger, the Company was required to file with the SEC a registration statement to register under the Securities Act the resale by GEM of all shares issuable under the GEM Warrant other than the Initial Exercised Shares, which was filed with the Company's S-1 in July 2021. The GEM Warrant also includes "piggyback" registration rights.

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

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

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 3,238,338 shares of common stock during the three months ended September 30, 2021, and received gross proceeds of \$31.1 million.

The Company sold 7,824,727 and 3,642,515 shares of common stock during the nine months ended September 30, 2022 and 2021, respectively, and received gross proceeds of \$23.0 million and \$39.6 million, respectively.

The Company issued 2,334,370 and 3,830,586 shares of common stock pursuant to warrants and Unit Purchase Options exercised during the three and nine months ended September 30, 2021, and received gross proceeds from the warrant exercise of \$9.2 million and from the Unit Purchase Option exercise of \$16.7 million, respectively. The Company issued 634,045 and 834,045 shares of common stock for consulting services during the three and nine months ended September 30, 2021, and recognized non-cash consulting expense in general and administrative expenses of \$7.9 million and \$12.8 million, respectively.

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

As discussed in Note 4, 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, all 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.

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. For the portion of the warrants subject to the base Exchange Ratio (3.16:1), the warrants were fully vested and therefore the incremental fair value of these Substitute Warrants at the date of the modification date was immediately recognized as compensation expense. For the incremental portion of the warrants with a 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 June 30, 2022 and therefore no expense has been recognized for this portion. 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 Unaudited Condensed Consolidated Statement of Operations. Unamortized compensation costs related to performance-based vesting conditions of these Substitute Warrants as of the modification date was \$23.8 million.

For any remaining outstanding warrants, as the warrant holders were no longer providing services at the date of the modification, in accordance with ASC 815, the Company concluded that the provisions in the Merger Agreement related to the Earnout Shares Milestone and the Earnout Cash Milestone and the contingent right to receive additional shares for these provisions precluded these Substitute Warrants from being accounted for as components of equity. As these Substitute Warrants meet the definition of a derivative as contemplated in ASC 815, the Substitute Warrants should be recorded as derivative liabilities on the balance sheet and measured at fair value at inception (on the date of the Merger) and at each reporting date in accordance with ASC 820, Fair Value Measurement, with changes in fair value recognized in the Statements of Operations in the period of change. On May 24, 2021, the Company recorded a warrant liability of \$53.3 million for the Substitute Warrants, reclassified out of additional-paid in capital \$38.2 million representing the fair value of these NeuroRx warrants immediately before the modification as a result of the Merger, and recognized a loss of

\$15.1 million for the incremental fair value of these Substitute Warrants which is recorded in the Change in fair value of warrant liabilities on the Condensed Consolidated Statement of Operations.

The Company recognized a loss on the change in fair value of the Substitute Warrants for the three months ended September 30, 2022 of less than \$0.1 million and a gain on the change in fair value of the Substitute Warrants for the nine months ended September 30, 2022 of \$0.1 million. The Company recognized a loss on the change in fair value of the Substitute Warrants for the three and nine months ended September 30, 2021 of \$16.3 million and \$0.4 million, respectively. Refer to Note 11 for further discussion of fair value measurement of the warrant liabilities.

As discussed above the GEM Substitute Warrants were exercised in July 2021, and changes in the fair value of the warrant liability through the date of exercise were recognized in the statement of operations and upon exercise any remaining instruments were reclassified to additional paid-in capital and includes associated escrow shares for the contingent earnouts.

The fair value of the original NeuroRx warrants and Substitute Warrants as of the Merger Date was determined using the Black-Scholes option-pricing model with the following assumptions for each:

	<u>Original Warrants</u>	<u>Substitute Warrants</u>
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	0.57-3.69	0.57-3.69
Dividend yield	—	—

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 and nine months ended September 30, 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 September 30, 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.

The Company recognized a gain on the change in fair value of the Placement Warrants for the three months ended September 30, 2022 and a loss on the change in fair value of the Placement Warrants for the three months ended September 30, 2021 of less than \$0.1 million and \$0.3 million, respectively. The Company recognized a gain on the change in fair value of the Placement Warrants for the nine months ended September 30, 2022 and 2021 of \$0.2 million and \$1.2 million, respectively. 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	Weighted Average Exercise Price	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2021	9,305,790	3.92	\$ 9.09	\$ 4,942
Issued	8,215,963	5.50	3.11	—
Outstanding as of September 30, 2022	17,521,753	3.78	\$ 6.29	\$ —

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 June 30, 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:

	<u>Original Options</u>	<u>Substitute Options</u>
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 September 30, 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 September 30, 2022, 6,049,178 shares of Common Stock are authorized for issuance pursuant to awards under the 2021 Plan. As of January 1, 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 September 30, 2022, 4,821,754 shares have been awarded and 1,227,424 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:

	<u>September 30, 2022</u>	<u>December 31, 2021</u>
	<u>(Unaudited)</u>	
Exercise price	\$0.51-\$3.10	\$6.44-\$23.41
Risk-free rate of interest	1.80%-3.62%	0.69%-1.45%
Expected term (years)	5.45-6.5	5.25-6.5
Expected stock price volatility	94.9%-147.8%	80.0%-85.9%
Dividend yield	—	—

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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)	(9.1)	—
Outstanding as of March 31, 2022	2,906,948	\$ 5.54	8.0	\$ 1,006
Granted	350,000	0.52	10.0	—
Forfeited	(550,833)	(3.76)	—	—
Outstanding as of June 30, 2022	2,706,115	\$ 5.20	7.7	\$ 174
Granted	80,000	0.69	10.0	—
Forfeited	(131,536)	(11.31)	—	—
Outstanding as of September 30, 2022	2,654,579	\$ 4.86	7.5	\$ 278
Options vested and exercisable as of September 30, 2022	1,064,852	\$ 3.84	5.5	\$ 196

The weighted average grant date fair value per share for employee stock and non-employee option grants during the three and nine months ended September 30, 2022, was \$0.64 and \$1.55. The weighted average grant date fair value per share for employee stock and non-employee option grants during the three months ended and nine months ended September 30, 2021, was \$9.80 and \$16.53 respectively. At September 30, 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 \$27.5 million, of which the Company expects to recognize \$3.0 million over a weighted-average period of approximately 1.7 years.

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

	Three months ended September 30,		Nine months ended September 30,	
	2022	2021	2022	2021
Stock-based compensation expense				
General and administrative	\$ 506	\$ 1,340	\$ 2,390	\$ 5,779
Research and development	35	220	472	436
Total stock-based compensation expense	\$ 541	\$ 1,560	\$ 2,862	\$ 6,215

Restricted Stock Awards

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

	Awards	Weighted Average Grant Date Fair Value
Balance as of December 31, 2021	-	-
Granted	1,000,000	\$ 0.57
Unvested Balance as of September 30, 2022	1,000,000	\$ 0.57

On July 12, 2022, the Board granted an award of 1,000,000 restricted shares of the Company (“Restricted Stock”) as an inducement to the newly appointed CEO, pursuant to a separate Restricted Stock Award Agreement (the “RSA”). The Restricted Stock will vest in approximately equal installments over three (3) years from the grant date, subject to continued service through the applicable vesting date.

As of September 30, 2022, total unrecognized compensation expense related to unvested RSAs granted was approximately \$0.5 million, which is expected to be recognized over a weighted-average period of approximately 2.8 years.

Stock-based compensation expense related to RSAs was less than \$0.1 million during the three and nine months ended September 30, 2022.

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 nine months ended September 30, 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 nine months ended September 30, 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 money market account represents a Level 1 measurement. The estimated fair value of the warrant liabilities and Earnout Cash contingent consideration represent Level 3 measurements. The following table presents information about the Company’s assets and liabilities that are measured at fair value on a recurring basis at September 30, 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	September 30	December 31
		2022	2021
(Unaudited)			
Assets:			
Money Market Account	1	\$ 16,985	\$ —
Liabilities:			
Warrant liabilities (Note 10)	3	\$ 56	\$ 292
Earnout Cash liability (Note 4)	3	\$ —	\$ 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 Company uses a modified Black-Scholes model approach for the Substitute Warrants which applies a probability factor based on the probabilities of achievement of the Earnout Cash Milestone and/or Earnout Shares Milestone at each reporting period, with changes in fair value recognized in the statement of operations. The estimated fair value of the warrant liabilities is determined using Level 3 inputs. Inherent in a Black Scholes options pricing model are assumptions related to expected share-price volatility, expected life, risk-free interest rate and dividend yield. The Company estimates the volatility of its common stock based on historical and peer company volatility that matches the expected remaining life of the warrants. The risk-free interest rate is based on the U.S. Treasury zero-coupon yield curve on the grant date for a maturity similar to the expected remaining life of the warrants. The expected life of the warrants is assumed to be equivalent to their remaining contractual term. The dividend rate is based on the historical rate, which the Company anticipates to remain at zero.

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

	<u>September 30, 2022</u>
Stock price on valuation date	\$ 0.60
Exercise price per share	\$ 11.50
Expected life	3.90
Volatility	104.1%
Risk-free rate	3.00%
Dividend yield	0.00%
Fair value of warrants	\$ 0.13

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

	<u>Fair Value</u>
Balance as of December 31, 2021	\$ 292
Gain upon re-measurement	(157)
Balance as of March 31, 2022	\$ 135
Gain upon re-measurement	(116)
Balance as of June 30, 2022	\$ 19
Loss upon re-measurement	37
Balance as of September 30, 2022	\$ 56

Earnout Cash liability

The fair value of the Earnout Cash liability has been estimated using probability-weighted discounted cash flow models (DCF) 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. Because (i) ZYESAMI NIH Phase III trial was stopped due to futility, and (ii) NRX-101 Phase III trial has not yet started, management estimated the probability as of September 30, 2022 of achieving the required milestones for payment of the Earnout Cash to be de minimis and therefore, the September 30, 2022 Earnout Cash liability was reduced to zero.

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

	<u>September 30, 2022</u>
Balance as of December 31, 2021	\$ 4,582
Gain upon re-measurement	(2,103)
Balance as of March 31, 2022	\$ 2,479
Gain upon re-measurement	(2,479)
Balance as of June 30, 2022	\$ —
Balance as of September 30, 2022	\$ —

12. Income Taxes

The Company recorded no provision or benefit for income tax expense for the three and nine months ended September 30, 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 September 30, 2022.

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 September 30, 2022 the Company paid a co-founder \$0.1 million, and during the nine months ended September 30, 2022 and 2021, \$0.2 million and \$0.1 million, respectively, for continuing technology support services and reimbursed expenses. These support services are ongoing.

The Fourth Amendment to the Glytech Agreement, effective as of December 31, 2020, includes an equity value-triggered transfer of Excluded Technology from Glytech to NRx Pharmaceuticals. The Excluded Technology is defined in the Glytech Agreement as any technology, and any know-how related thereto, covered in the licensed patents that do not recite either D-cycloserine or lurasidone individually or jointly. This definition would cover pharmaceutical formulations, including some that NRx Pharmaceuticals considers “pipeline” or “future product” opportunities, that contain a combination of pharmaceutical components different from those contained in NRX-100 and NRX-101. The Company had the right to acquire the Excluded Technology for no additional consideration if certain conditions were satisfied prior to August 6, 2022, but the conditions were not satisfied and the Company is currently in discussions with Glytech to extend its right to acquire the Excluded Technology.

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 \$0.2 million and \$0.1 million during the three months ended September 30, 2022 and 2021, respectively, and \$0.7 million and \$0.4 million during the nine months ended September 30, 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 CEO and the Company’s Senior Director of Global Communications, who are responsible for assuring that the services are provided on financial terms that are at market. The Company paid this family member a total of less than \$0.1 million and less than \$0.1 million during the three months ended September 30, 2022 and 2021, respectively, and \$0.1 million and \$0.1 million during the nine months ended September 30, 2022 and 2021, respectively. These services are ongoing.

In addition, the Company paid PillTracker for digital health product development required to track the use of Aviptadil in clinical trials. Zachary Javitt and Jonathan Javitt are the chief executive officer and board chairman, respectively, of PillTracker. PillTracker agreements and transactions are submitted to the General Counsel of the Company and the Chair of the Audit Committee for approval in accordance with the terms of the Company’s Related Person Transactions Policy. The Master Service Agreement dated April 1, 2020 (“MSA”), and all work orders thereunder, have been suspended by mutual agreement pending the Company’s re-evaluation of its respiratory franchise. NRx Pharmaceuticals paid PillTracker \$0.3 million during the three months ended September 30, 2021, and \$0.2 million and \$0.7 million during the nine months ended September 30, 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 September 30, 2022 and December 31, 2021, respectively.

14. Subsequent Events

Financing

On November 4, 2022, the Company issued an 9% redeemable promissory note (the “Note”) to Streeterville Capital, LLC, a Utah limited liability company, for an aggregate principal amount of \$11,020,000. The Company intends to use the proceeds from such issuance for general corporate purposes. The Note matures 18 months from the date of issuance. The Note carries an original issue discount of \$1,000,000 which was deducted from the principal balance of the Note. The net proceeds from the issuance of the Note was \$10,000,000 after transaction costs including the original issue discount, legal and other fees are included.

The Company has the option to prepay the Note during the term by paying an amount equal to 110% of the principal, interest, and fees owed as of the prepayment date. The noteholder has the right to redeem up to \$1,000,000 of the outstanding balance of the Note per month starting on the six-month anniversary of the issue date. Payments may be made by the Company at its option in: (i) in cash, (ii) by paying the redemption amount in the form of shares of Common Stock with the number of redemption shares being equal to the portion of the applicable redemption amount divided by the Redemption Conversion Price, or (iii) a combination of cash and shares of common stock. Beginning May 1, 2023, in the event (a) the daily dollar trading volume of the common stock of the Company on any given trading day is at least fifty percent (50%) greater than the lower of (i) the median daily dollar trading volume over the previous ten (10) trading days or (ii) the daily dollar trading volume on the trading day immediately preceding the date of measurement or (b) if the closing trade price on any given trading day is at least thirty percent (30%) greater than the Nasdaq Minimum Price, then lender will be entitled to redeem over the following ten (10) trading days an amount of indebtedness then outstanding under the Note equal to twice (2x) the monthly redemption amount of \$1,000,000 solely by payment by stock, if permitted under the agreement, subject to maximum percentage and other ownership limitations.

Settlement of Litigation

On November 12, 2022, NRx Pharmaceuticals, Inc. (“NRx” or the “Company”) entered into a Settlement Agreement and Asset Purchase Agreement (“APA”) with Relief Therapeutics Holding AG and Relief Therapeutics International (the “Relief Parties”) to settle the outstanding lawsuit with respect to the Collaboration Agreement dated September 18, 2020 between the Company and the Relief Parties (the “Collaboration Agreement”).

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

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

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

Mutual indemnity provisions in the APA will protect each party from any breaches of the settlement arrangements by the other party, provided, that the Company’s indemnity obligations will not start until the Relief Parties have begun making royalty or milestone payments to NRx, subject to certain exceptions. With respect to the Company, there is an indemnity threshold such that the Company will not be liable for any indemnity claims until such claims are in excess of \$0.5 million (and then only for the amount above \$0.5 million). The Company’s indemnity obligation is capped at \$2.0 million with respect to breaches of representations and warranties and \$3.0 million with respects to breaches of covenants or other agreements. Additionally, subject to certain exceptions, the Company’s indemnity obligations cannot exceed the amount

that the Relief Parties actually pay to the Company for milestone and royalty payments. The parties have 30 days to implement the agreed actions and achieve closing under the APA, at which time all claims and counterclaims between the Company and the Relief Parties will be dismissed with prejudice.

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

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

Overview

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

NRx Pharmaceuticals is a clinical stage pharmaceutical company that is developing, through its wholly owned operating subsidiary, NeuroRx, NRX-100 and NRX-101, the first oral therapeutic for the treatment of Bipolar Depression in patients with Acute Suicidal Ideation and Behavior (ASIB) and Sub-Acute Suicidal Ideation and Behavior (“SSIB”). NRX-100 and NRX-101 were developed based upon 30 years of basic science and clinical expertise contributed by Dr. Daniel Javitt, MD, PhD, related to the role of the brain’s N-methyl-D-aspartate (“NMDA”) receptor in regulating human thought processes in general and in regulating depression and suicidality. The NRX-100 and NRX-101 investigational therapy begins with a single dose of ketamine (NRX-100), a Food & Drug Administration (“FDA”) approved anesthetic, followed by approximately six weeks of daily oral NRX-101. NRX-101 is being developed as a rapid-onset and sustained treatment for bipolar depression with ASIB and SSIB. NRX-101 combines d-Cycloserine, a NMDA receptor modulator, and lurasidone, a 5-HT_{2A} receptor antagonist.

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

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

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

- In 2017, NRX-101 received an investigational new drug (IND) clearance by the U.S. Food and Drug Administration (FDA) and a Phase 2b/3 clinical trial commenced for bipolar depression with ASIB. Later that year, the FDA granted NRX-101 a Fast Track designation for the same indication.
- In 2018, the FDA provided a Letter of Support to the Company encouraging the development of Glutamine+Glutamate (Glx) as a pharmacodynamic biomarker for depression. The letter referenced published and unpublished data demonstrating a significant association between clinical symptoms of depression and levels of brain Glx.
- In the STABIL-B Phase 2 trial, the Phase 2 portion of the Phase 2b/3 trial, patients with bipolar depression and ASIB received either NRX-101 or lurasidone after an intravenous infusion of NRX-100 (ketamine). The proof-of-concept data presented at the American Congress of Neuropsychopharmacology in 2018 demonstrated with statistical significance that NRX-101 treated patients experienced lower depression scores and did not relapse.
- Based on STABIL-B findings, the FDA granted NRX-101 Breakthrough Therapy Designation and a Special Protocol Agreement (“SPA”) for bipolar depression in patients with ASIB, which affects ~150K-180K patients per year in the U.S. The Breakthrough Therapy Designation allows for an expedited rolling submission of a new drug application (“NDA”) for investigational drugs that have demonstrated substantial improvement over existing approved therapies, and the SPA allows for a single registrational trial of NRX-101 in severe bipolar depression in patients with ASIB after stabilization with ketamine, using a protocol similar to the STABIL-B trial with a patient population of less than 100.
- NRx Pharmaceuticals plans to initiate the registrational Phase 3 portion of the Phase 2b/3 clinical trial of bipolar depression in patients with ASIB in 4Q 2022. The trial is designed as a double-blind, adaptive trial with a 2:1 randomization of NRX-101 vs. lurasidone alone in 72 patients. The study is expected to find that following initial stabilization with a single infusion of ketamine (NRX-100), treatment with NRX-101 is superior to lurasidone alone in maintaining remission from symptoms of depression and suicidality as measured by the MADRS-10 depression scale and the CGI suicidality scale.
- NRx Pharmaceuticals announced that it has transferred Phase 3 commercial drug manufacturing processes to the U.S. and released Phase 3 drug manufactured via the expected commercial-stage processes. NRx Pharmaceuticals has submitted its manufacturing file to the FDA. This investigational drug manufactured according to these new processes will be used in the upcoming Phase 3 trial.
- A data readout from the registrational Phase 3 clinical trial is expected in 3Q 2023. Assuming that efficacy endpoints and safety are met, NRx Pharmaceuticals plans to initiate submission of a NDA to the FDA by year-end 2023, as allowed under Breakthrough Therapy Designation.
- Company has received numerous partnering inquiries for NRX-101

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

- A Phase 2 double-blind study completed in 2018 demonstrated the ability of NRX-101 to improve depression and suicidality over 6 weeks when taken twice daily over lurasidone alone after an initial stabilization with ketamine. The current study involving patients with bipolar depression and sub-acute suicidality (not requiring hospitalization) does not include the use of ketamine; all patients are being treated in an outpatient setting.

- Insights from this study will guide NRx Pharmaceuticals in the potential expansion of the indication for NRX-101 to bipolar depression with SSIB, which represents a significantly 2-3x larger patient population than those with bipolar depression and ASIB. A data readout of this study is expected by 1H 2023.

NRX-101 Indication – Post Traumatic Stress Disorder

- In September 2022, NRx announced plans to investigate PTSD as an additional indication. The Company expects to commence Phase 2 clinical trial planning of NRX-101 in PTSD in 4Q 2022.
- Depression in PTSD may be driven by pathways that are similar to those that drive depression in other conditions (NMDA and 5-HT2A). Additionally, approximately 10% of patients with PTSD may experience suicidality, especially those with severe PTSD.
- In a preclinical PTSD study, D-cycloserine, a component of NRX-101, demonstrated the ability to extinguish recurring images of traumatic events, also known as fear memory, in a validated WKY model of PTSD.

Since inception, NRx Pharmaceuticals has incurred significant operating losses. For the three months ended September 30, 2022 and 2021, NRx Pharmaceuticals' net loss was \$9.1 million and \$37.0 million, respectively. For the nine months ended September 30, 2022 and 2021, NRx Pharmaceuticals' net loss was \$29.5 million and \$62.7 million, respectively. As of September 30, 2022, NRx Pharmaceuticals had an accumulated deficit of \$212.8 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 consisted 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 September 30, 2022 and 2021

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

	Three months ended September 30,		Change
	2022	2021	Dollars
	(Unaudited)		
Operating expenses:			
Research and development	\$ 4,129	\$ 6,276	\$ (2,147)
General and administrative	5,012	13,823	(8,811)
Total operating expenses	9,141	20,099	(10,958)
Loss from operations	\$ (9,141)	\$ (20,099)	\$ 10,958
Other (income) expenses:			
Interest income	\$ (95)	\$ —	\$ (95)
Interest expense	—	5	(5)
Change in fair value of warrant liabilities	37	16,537	(16,500)
Change in fair value of Earnout Cash liability	—	408	(408)
Total other (income) expenses	(58)	16,950	(17,008)
Net loss	\$ (9,083)	\$ (37,049)	\$ 27,966

Operating expenses

Research and development expenses

For the three months ended September 30, 2022, NRx Pharmaceuticals recorded \$4.1 million of research and development expenses compared to \$6.3 million for the three months ended September 30, 2021. The decrease of \$2.1 million related primarily to a decrease of \$1.5 million in clinical trials and development expenses related to ZYESAMI, a decrease of \$0.6 million related to fees paid to regulatory and process development consultants, a decrease of \$0.2 million in stock-based compensation, partially offset by an increase of \$0.2 million in other regulatory and process development expenses. The \$4.1 million and \$6.3 million of research and development expenses for the three months ended September 30, 2022 and 2021, respectively, include less than \$0.1 million and \$0.2 million, respectively, of non-cash stock-based compensation.

General and administrative expenses

For the three months ended September 30, 2022, NRx Pharmaceuticals recorded \$5.0 million of general and administrative expenses compared to \$13.8 million for the three months ended September 30, 2021. The decrease of \$8.8 million was primarily, related to a decrease of \$8.3 million of consultant fees, a decrease of \$0.8 million in stock-based compensation expense, a decrease of \$0.3 million in other general and administrative expenses, a decrease of less than \$0.1 million in legal and professional fees, partially offset by an increase of \$0.6 million in payroll and salary expenses. The \$5.0 million and \$13.8 million of general and administrative expenses for the three months ended September 30, 2022 and 2021, respectively, include \$0.5 million and \$1.3 million, respectively, of non-cash stock-based compensation.

Other (income) expenses

Interest income

For the three months ended September 30, 2022, NRx Pharmaceuticals recorded approximately \$0.1 million of interest income. The increase is primarily related to the earned interest income on the money market account.

Change in fair value of warrant liabilities

For the three months ended September 30, 2022, NRx Pharmaceuticals recorded a loss of less than \$0.1 million related to the change in fair value of the warrant liabilities compared to a loss of \$16.5 million for the three months ended September 30, 2021. The decrease of \$16.5 million related to the decrease in the fair value of certain Substitute Warrants and the Placement Warrants assumed pursuant to the Merger Agreement.

Change in fair value of Earnout Cash liability

For the three months ended September 30, 2022, NRx Pharmaceuticals recorded a gain of \$0.4 million for the three months ended September 30, 2021. The gain related to the decrease in the fair value of the Earnout Cash liability pursuant to the Merger Agreement.

Results of operations for the nine months ended September 30, 2022 and 2021

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

	Nine months ended September 30,		Change Dollars
	2022	2021	
	(Unaudited)		
Operating expenses:			
Research and development	\$ 12,571	\$ 13,844	\$ (1,273)
General and administrative	21,876	28,382	(6,506)
Settlement expense	—	21,366	(21,366)
Reimbursement of expenses from Relief Therapeutics	—	(771)	771
Total operating expenses	34,447	62,821	(28,374)
Loss from operations	\$ (34,447)	\$ (62,821)	\$ 28,374
Other (income) expenses:			
Gain on extinguishment of debt	\$ —	\$ (121)	\$ 121
Interest income	(119)	—	(119)
Interest expense	3	16	(13)
Change in fair value of warrant liabilities	(236)	(823)	587
Change in fair value of Earnout Cash liability	(4,582)	763	(5,345)
Total other (income) expenses	(4,934)	(165)	(4,769)
Net loss	\$ (29,513)	\$ (62,656)	\$ 33,143

Operating expenses

Research and development expenses

For the nine months ended September 30, 2022, NRx Pharmaceuticals recorded \$12.6 million of research and development expenses compared to \$13.8 million for the nine months ended September 30, 2021. The decrease of \$1.3 million is related to a decrease of \$1.5 million in clinical trials and development expenses related to ZYESAMI, a decrease of \$0.5 million in fees paid to regulatory and process development consultants, partially offset by an increase of \$0.7 million in other regulatory and process development costs. The \$12.6 million and \$13.8 million of research and development expenses for the nine months ended September 30, 2022 and 2021, respectively, include \$0.5 million and \$0.4 million, respectively, of non-cash stock-based compensation.

General and administrative expenses

For the nine months ended September 30, 2022, NRx Pharmaceuticals recorded \$21.9 million of general and administrative expenses compared to \$28.4 million for the nine months ended September 30, 2021. The decrease of \$6.5 million was primarily, related to a decrease of \$12.3 million in consultant fees, a decrease of \$3.4 million in stock-based compensation expense, partially offset by an increase of \$4.1 million in legal, professional and accounting fees, an increase of \$3.7 million in insurance expense, an increase of \$0.9 million in payroll and salary expenses, and an increase of \$0.5 million in other general and administrative expenses. The \$21.9 million and \$28.4 million of general and administrative expenses for the nine months ended September 30, 2022 and 2021, respectively, include \$2.4 million and \$5.8 million, respectively, of non-cash stock-based compensation.

Settlement expense

For the nine months ended September 30, 2022, NRx Pharmaceuticals recorded no settlement expense compared to \$21.4 million of settlement expense for the nine months ended September 30, 2021 related to the GEM Warrant reflecting the incremental value through the date of issuance.

Reimbursement of expenses from Relief Therapeutics

For the nine months ended September 30, 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 nine months ended September 30, 2021.

Other (income) expenses

Gain on extinguishment of debt

For the nine months ended September 30, 2022, NRx Pharmaceuticals recorded no gain on extinguishment of debt compared to \$0.1 million for the nine months ended September 30, 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 nine months ended September 30, 2021.

Interest income

For the nine months ended September 30, 2022, NRx Pharmaceuticals recorded \$0.1 million of interest income. The increase of less than \$0.1 million related primarily to the earned interest income on the money market account.

Change in fair value of warrant liabilities

For the nine months ended September 30, 2022, NRx Pharmaceuticals recorded a gain of \$0.2 million related to the change in fair value of the warrant liabilities compared to a gain of \$0.8 million for the nine months ended September 30, 2021. The decrease of \$0.6 million related to the decrease in the fair value of certain Substitute Warrants and the Placement Warrants assumed pursuant to the Merger Agreement.

Change in fair value of Earnout Cash liability

For the nine months ended September 30, 2022, NRx Pharmaceuticals recorded a gain of \$4.6 million related to the change in fair value of the Earnout Cash liability compared to a loss of \$0.8 million for the nine months ended September 30, 2021. The decrease of \$4.6 million is 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 NRX-101 will commence in the near term or that additional financings will be available to it and, if available, on acceptable terms or at all. This could negatively impact NRx Pharmaceuticals' business and operations and could also lead to the reduction of NRx Pharmaceuticals' operations.

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.

On November 4, 2022, the Company issued an 9% redeemable promissory note (the "Note") to Streeterville Capital, LLC, a Utah limited liability company, for an aggregate principal amount of \$11,020,000. The Company intends to use the proceeds from such issuance for general corporate purposes. The Note matures 18 months from the date of issuance subject

to certain acceleration provisions. The Note carries an original issue discount of \$1,000,000 which was deducted from the principal balance of the Note. The net proceeds from the issuance of the Note was \$10,000,000 after transaction costs including the original issue discount, legal and other fees are included.

The Company has the option to prepay the Note during the term by paying an amount equal to 110% of the principal, interest, and fees owed as of the prepayment date. The noteholder has the right to redeem up to \$1,000,000 of the outstanding balance of the Note per month starting six months after the issuance date. Payments may be made by the Company at its option in: (i) in cash, (ii) by paying the redemption amount in the form of shares of Common Stock with the number of redemption shares being equal to the portion of the applicable redemption amount divided by the Redemption Conversion Price (as defined below), or (iii) a combination of cash and shares of common stock. The “Redemption Conversion Price” on any given redemption date equals 85% multiplied by the average of the two lowest daily volume weighted average prices per share of the common stock during the ten trading days immediately preceding the date that the noteholder delivers notice electing to redeem a portion of the Note. Beginning May 1, 2023, in the event (a) the daily dollar trading volume of the common stock of the Company on any given trading day is at least fifty percent (50%) greater than the lower of (i) the median daily dollar trading volume over the previous ten (10) trading days or (ii) the daily dollar trading volume on the trading day immediately preceding the date of measurement or (b) if the closing trade price on any given trading day is at least thirty percent (30%) greater than the Nasdaq Minimum Price, then lender will be entitled to redeem over the following ten (10) trading days an amount of indebtedness then outstanding under the Note equal to twice (2x) the monthly redemption amount of \$1,000,000 solely by payment by stock, if permitted under the agreement, subject to maximum percentage and other ownership limitations.

Private Placement

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 September 30, 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%).

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 June 30, 2022, the fair value of the Earnout Cash liability has been estimated to be \$0 million. Upon closing of the Merger, the estimated fair value of the Earnout Shares was \$255.8 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 \$0 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:

	<u>September 30, 2022</u> (Unaudited)	<u>December 31, 2021</u>
Balance Sheet Data:		
Cash	\$ 18,249	\$ 27,605
Total assets	24,824	32,729
Earnout cash liability	—	4,582
Total liabilities	8,042	11,923
Total stockholders' equity (deficit)	16,782	20,806
	<u>September 30,</u>	
	<u>2022</u>	<u>2021</u>
	(Unaudited)	
Statement of Cash Flow Data:		
Net cash used in operating activities	\$ (31,437)	\$ (26,423)
Net cash used in investing activities	(11)	(7)
Net cash provided by financing activities	22,092	63,455
Net (decrease) increase in cash	<u>\$ (9,356)</u>	<u>\$ 37,025</u>

Operating activities

During the nine months ended September 30, 2022, operating activities used \$31.4 million of cash, primarily resulting from a net loss of \$29.5 million, increased by net non-cash gains of \$2.0 million, including \$4.6 million of gain from the change in fair value of earn out liability and \$0.2 million of gain from the change in fair value of warrant liabilities, partially offset by \$2.9 million of stock-based compensation expense, and an increase in net operating assets of less than \$0.1 million.

During the nine months ended September 30, 2021, operating activities used \$26.4 million of cash, primarily resulting from a net loss of \$62.7 million, reduced by non-cash charges of \$40.2 million, including \$21.4 million of non-cash settlement expense related to the GEM Warrant, \$12.8 million in consulting expense, \$6.2 million of stock-based compensation expense, \$0.8 million of change in fair value of earnout cash liability, partially offset by a gain from the change in fair value of warrant liability of \$0.8 million, a gain on extinguishment of debt of \$0.1 million, and an increase in net operating assets of \$4.0 million.

Financing activities

During the nine months ended September 30, 2022, financing activities provided \$22.1 million of cash resulting from \$22.6 million in net proceeds received by the Company from the issuance of common stock and preferred investment options in a private placement partially offset by \$0.5 million of repayment of Relief Therapeutics loan.

During the nine months ended September 30, 2021, financing activities provided \$63.5 million of cash, primarily resulting from \$27.4 million in repayment of notes payable assumed in Merger, \$16.7 million in proceeds from issuance of common stock for exercise of warrant, \$11.1 million for the effect of the merger, net of transaction costs, \$9.6 million in proceeds from issuance of common stock and exercise of stock options, partially offset by \$1.1 million in repayment of notes payable assumed in Merger and \$0.2 million in repayment of notes payable – related party.

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 and nine months ended September 30, 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 3 to its financial statements, NRx Pharmaceuticals believes the following are the critical accounting policies used in the preparation of its financial statements that require significant estimates and judgments.

Earnout Cash Liability

The fair value of the Earnout Cash liability has been estimated using probability-weighted discounted cash flow models (DCF) 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. Because: (i) ZYESAMI

NIH Phase III trial was stopped due to futility, and (ii) NRX-101 Phase III trial has not yet started, management estimated the probability as of September 30, 2022 of achieving the required milestones for payment of the Earnout Cash to be de minimis and therefore, the September 30, 2022 Earnout Cash liability is zero. 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 liabilities

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

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

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

Our Chief Executive Officer and Chief Financial Officer (“certifying officers”) have conducted an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the Exchange Act)) as of September 30, 2022. Our certifying officers concluded that, as a result of the material weakness in internal control over financial reporting as described below, our disclosure controls and procedures were not effective as of September 30, 2022.

Per Rules 13a-15(e) and 15d-15(e), the term disclosure controls and procedures means controls and other procedures of an issuer that are designed to ensure that information required to be disclosed by the issuer in the reports that it files or submits under the Exchange Act (15 U.S.C. 78a et seq.) is recorded, processed, summarized, and reported within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Exchange Act is accumulated and communicated to the issuer’s management, including its Chief Executive Officer and Chief Financial Officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Our management, including our chief executive officer and chief financial officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all errors and all fraud due to inherent limitations of internal controls. Because of such limitations, there is a risk that material misstatements will not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

The material weakness was due to ineffective risk assessment related to review procedures for complex transactions. This led to a deficiency in the design and implementation of appropriate review controls for complex warrant transactions. The material weakness resulted in a restatement of its financial statements to reclassify the Company’s Substitute Warrants as described in the Explanatory Note to this Quarterly Report.

(b) Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) during the most recent fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

In light of the previously noted material weakness, we are enhancing our processes and controls to identify and appropriately apply applicable accounting requirements to better evaluate and understand the nuances of the complex accounting standards that apply to our financial statements. Additionally, management is in the process of performing a risk assessment that will identify areas of increased risk in both the financial statements and business processes such as complex transactions.

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”), which was followed by a counter claim from the Company for breach and repudiation of the Collaboration Agreement by Relief Therapeutics.

On November 12, 2022, the Company and Relief Therapeutics entered into a Settlement Agreement and an Asset Purchase Agreement (“APA”), which are intended to resolve the parties’ claims. The parties have thirty (30) days to implement the terms of the Settlement Agreement and APA and achieve closing. Upon closing, the parties will dismiss their respective claims. *Please See Section 14 - Subsequent Events for a description of the settlement arrangements.*

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

In addition to the matters described above, we may become involved in various legal actions incidental to our business. As of the date 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 “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 Securities. The Company’s registration statement on Form S-3 to register the Securities was declared effective on June 21, 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 July 12, 2022, between NRx Pharmaceuticals, Inc. and Stephen Willard.
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 September 30, 2022 (Unaudited) and December 31, 2021; (ii) Unaudited Condensed Consolidated Statements of Operations for the three and nine months ended September 30, 2022 and 2021 ; (iii) Unaudited Condensed Consolidated Statements of Changes in Stockholders' Equity (Deficit) for the nine months ended September 30, 2022 and 2021; (iv) Unaudited Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 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: November 14, 2022

By: /s/ Seth Van Voorhees

Name: Seth Van Voorhees
Title: Chief Financial Officer
(Principal Financial Officer)

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 Stephen Willard (“Executive”) effective as of July 12, 2022 (the “Effective Date”).

RECITALS:

WHEREAS, subject to the terms and conditions hereinafter set forth, the Company wishes to employ Executive as its Chief Executive Officer 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 Executive Officer 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 Chevy Chase, Maryland, 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. Executive acknowledges and agrees that he shall be required to travel for work, as reasonably required by the Company.

2. **Term.** Subject to earlier termination as hereafter provided, this Agreement shall have an original term of two (2) years commencing on 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 ninety (90) 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 Executive Officer reporting to 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 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) Executive will be appointed to the Board to fill one of the vacant seats on the Board within thirty (30) days following the Effective Date.
- (e) During the term hereof, 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.
- (f) If requested by the Company, during the term hereof, Executive shall serve as a director, manager or officer of the Company and any of its affiliates for no additional compensation.

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 five hundred thousand dollars (\$500,000) per annum (i.e., \$41,666.67 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., \$250,000 based on the initial 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 subject to continued employment on the payment date, in accordance with the payroll and bonus practices of the Company. The Target Bonus for 2022 shall be pro-rated based on the number of days Executive is employed by the Company during the year.

(c) **Equity Compensation.** As an inducement to join the Company, Executive shall be awarded a grant of 1,000,000 shares of restricted stock of the Company under the terms of a separate equity award agreement which shall be designed to comply with the NASDAQ inducement exemption and such award shall be subject to the terms and conditions as set forth in the award agreement (including, without limitation, annual vesting over a three-year period).

(d) **Vacations.** Executive shall be entitled to four (4) weeks of vacation a year (pro-rated for partial years of employment), 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 Board.

(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 consistent with the Company's cost sharing for employer sponsored health insurance). 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.

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 earned 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 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;

(v) Executive's material breach of this Agreement or of any Company policy; or

(vi) Disciplinary proceedings or other events that impair Executive's ability to function as Chief Executive Officer 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 (or death or disability) at any time upon ninety (90) days' notice to Executive (or payment in lieu of such notice) or otherwise upon a Change of Control. Upon such termination, 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. Any obligation of the Company to Executive hereunder is conditioned, however, on Executive signing a timely and effective release of claims in a form provided by the Company ("Release") and such Release must become effective and irrevocable no later than 55 days following such termination. (the "Release Condition") 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 date the Release becomes effective and irrevocable, 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 ninety (90) 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 ninety (90) 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 the occurrence of any of the following without Executive's consent: (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; (iv) the failure of the Board to nominate Executive to fill one of the vacant seats on the Board in accordance with Clause 3(d) above; or (v) the required relocation of Executive's place of employment to a location that is more than 25 miles from his home. In order for Executive to terminate his employment for Good Reason, Executive must give the Company within sixty (60) days after the initial occurrence of the events which may constitute Good Reason, at least thirty (30) days' notice of such purported Good Reason and an opportunity to cure the Good Reason within such period. Should such termination occur, 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 with such severance payable in continuing installments over such one year period in accordance with the Company's customary payroll practices. The Company shall also pay Executive all accrued compensation and prorated Target Bonus through the date of termination. Any obligation of the Company to Executive hereunder is conditioned however, on Executive timely satisfying the Release Condition. 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 date the Release becomes effective and irrevocable, 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.

(d) If Executive's employment is terminated for any reason or no reason, then Executive shall be deemed to, and shall, resign (i) from any board or other governing body to which he has been appointed or nominated by or on behalf of Company or its affiliates and (ii) from any position with Company or any of its affiliates including, but not limited to, as an officer of any such affiliate and Executive will execute any documents reasonably required to effectuate the foregoing and failure to do so shall result in a termination for Cause.

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, without limitation:

- (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;
- (iii) development of any drug involving suicidal ideation or in which suicidal ideation is a substantial part of the clinical program; and
- (iv) any other drug which is developed or distributed by the Company during the term hereof.

(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 or her 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

(e) Nothing in this Agreement shall prohibit or restrict the Company, its affiliates or Executive or their respective attorneys from: (i) making any disclosure of relevant and necessary information or documents in any action, investigation, or proceeding relating to this Agreement, or as required by law or legal process, including with respect to possible violations of law; (ii) participating, cooperating, or testifying in any action, investigation, or proceeding with, or providing information to, any governmental agency or legislative body, any self-regulatory organization, and/or pursuant to the Sarbanes-Oxley Act; or (iii) accepting any U.S. Securities and Exchange Commission awards. In addition, nothing in this Agreement prohibits or restricts the Company, its affiliates or Executive from initiating communications with, or responding to any inquiry from, any regulatory or supervisory authority regarding any good faith concerns about possible violations of law or regulation.

(f) Pursuant to 18 U.S.C. § 1833(b), Executive will not be held criminally or civilly liable under any Federal or State trade secret law for the disclosure of a trade secret of the Company or any of its affiliates that (i) is made (A) in confidence to a Federal, State, or local government official, either directly or indirectly, or to Executive's attorney and (B) solely for the purpose of reporting or investigating a suspected violation of law; or (ii) is made in a complaint or other document that is filed under seal in a lawsuit or other proceeding. If Executive files a lawsuit for retaliation by the Company for reporting a suspected violation of law, Executive may disclose the trade secret to Executive's attorney and use the trade secret information in the court proceeding, if Executive files any document containing the trade secret under seal and does not disclose the trade secret except under court order.

Nothing in this Agreement is intended to conflict with 18 U.S.C. § 1833(b) or create liability for disclosures of trade secrets that are expressly allowed by such section.

(g) Executive agrees that, during Executive's employment with the Company and at all times thereafter, Executive shall not issue, circulate, publish or utter any false or disparaging statements, remarks or rumors about the Company or the customers, employees, directors, managers, officers, products, partners, shareholders or services of the Company; provided, that, nothing herein shall prohibit Executive from providing truthful testimony if such testimony is required by law).

10. Section 409A of the Code. Anything to the contrary herein notwithstanding, all benefits or payments provided by the Company to Executive are intended to be exempt from Section 409A and any payments or benefits 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 that constitutes nonqualified deferred compensation, 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). For purposes of Section 409A, Executive's right to receive any installment payment under this Agreement shall be treated as a right to receive a series of separate and distinct payments.

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 represents and warrants to the Company that as of the date hereof and as of the Effective Date (i) neither the execution and delivery of this Agreement by Executive nor (ii) the performance of Executive's obligations hereunder, shall constitute a default under or a breach of any other agreement or contract to which Executive is a party or by which

Executive is bound, nor shall the execution and delivery of this Agreement by Executive nor the performance of Executive's duties and obligations hereunder give rise to any claim or charge against either Executive or the Company based upon any other contract, or agreement to which Executive is a party or by which Executive is bound, (iii) Executive is not now subject to any covenants against competition or similar covenants, any court order or other legal obligation, or other agreement that would affect the performance of his obligations hereunder or would otherwise conflict with, prevent or restrict the full performance of Executive's duties and obligations to the Company hereunder during or after the Term, (iv) there are no facts or circumstances or actions by Executive which would result in material economic or reputational damage to the Company, and (v) Executive is lawfully permitted to work in the United States on and after the Effective Date. Executive's employment is contingent upon the completion of a background investigation and reference check satisfactory to the Company in its discretion. Executive covenants that he will not disclose or use on behalf of the Company any proprietary information of a third party without such party's consent. Any breach of this Section 12 shall constitute Cause.

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 Executive proposes to disclose or use such information, (ii) any information that Executive is legally required to disclose, or (iii) any information that is or becomes available to Executive on a non-confidential basis from a source other than Executive or an employee or a contractor of the Company; provided that such source is not known by 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. **Cooperation.** Subject to the terms of this Agreement, in the event that any action, suit, claim, hearing, proceeding, arbitration, mediation, audit, assessment, inquiry or investigation (whether civil, criminal, administrative or otherwise) (each, a “Proceeding”) is commenced by any governmental authority or other Person in connection with the Company or any of its affiliates during the term hereof or thereafter, Executive agrees to cooperate in good faith with the Company or any such affiliate to defend against such Proceeding and, if an injunction or other order is issued in any such Proceeding, to cooperate in good faith with the Company or any such affiliate in its efforts to have such injunction or other order lifted. Such cooperation shall include, but not be limited to, attending any telephone or in-person meetings, conferences, interviews, depositions, hearings, proceedings or preparation sessions, and providing access to any books and records in Executive’s control, in each case, at the request of the Company or any of its affiliates or any of their respective representatives.

14. **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.

15. **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.

16. **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.

17. **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.

18. **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 General Counsel, or to such other address as either party may specify by notice to the other actually received.

19. **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.

20. **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.

21. **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.

22. **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.

23. **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.

24. **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 18 does not constitute good and sufficient service of process. The provisions of this Section 24 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

DocuSigned by:
Pat Flynn
9792925C055A44C...

By: _____

DocuSigned by:
Stephen H. Willard
9C2DF688DD964D1...

By: _____

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

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

1. I have reviewed this Quarterly Report on Form 10-Q of NRx Pharmaceuticals, Inc. (the "Registrant");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Quarterly Report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the Registrant as of, and for, the periods presented in this Quarterly Report;
4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant is made known to us by others within those entities, particularly during the period in which this Quarterly Report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and
5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: November 14, 2022

/s/ Stephen H. Willard

Stephen H. Willard

Chief Executive Officer (Principal Executive Officer)

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

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

1. I have reviewed this Quarterly Report on Form 10-Q of NRx Pharmaceuticals, Inc. (the "Registrant");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Quarterly Report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the Registrant as of, and for, the periods presented in this Quarterly Report;
4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant is made known to us by others within those entities, particularly during the period in which this Quarterly Report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the Registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the Registrant's internal control over financial reporting that occurred during the Registrant's most recent fiscal quarter (the Registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the Registrant's internal control over financial reporting; and
5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Registrant's auditors and the audit committee of the Registrant's board of directors (or persons performing equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: November 14, 2022

/s/ Seth Van Voorhees

Seth Van Voorhees

Chief Financial Officer (Principal Financial Officer)

**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 September 30, 2022 (the "Report") by NRx Pharmaceuticals, Inc. (the "Registrant"), I, Stephen H. Willard, as Chief Executive Officer of the Registrant hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

1. the Report fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and
2. the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: November 14, 2022

/s/ Stephen H. Willard

Stephen H. Willard

Chief Executive Officer (Principal Executive Officer)

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

**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 September 30, 2022 (the "Report") by NRx Pharmaceuticals, Inc. (the "Registrant"), I, Seth Van Voorhees, as Chief Financial Officer of the Registrant hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

- 1.the Report fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and
- 2.the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: November 14, 2022

/s/ Seth Van Voorhees

Seth Van Voorhees

Chief Financial Officer (Principal Financial Officer)

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