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

**FORM 10-Q**

**(Mark One)**

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

**For the Quarterly Period Ended: March 31, 2024**

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

**For the transition period from to**

**Commission File Number: 001-38302**

**NRX PHARMACEUTICALS, INC.**
(Exact name of registrant as specified in its charter)

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

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

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

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

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

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

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

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

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

| | |
|---|---|
| Large accelerated filer ☐ | Accelerated filer ☐ |
| | Smaller reporting company ☒ |
| Non-accelerated filer ☒ | Emerging growth company ☐ |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

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

As of May 14, 2024, the registrant had 10,700,609 shares of Common Stock outstanding.

## PART I FINANCIAL INFORMATION

### ITEM 1. Financial Statements

**NRX PHARMACEUTICALS, INC.**

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

| | March 31, 2024 (Unaudited) | December 31, 2023 |
|---|---|---|
| **ASSETS** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 1,319 | $ 4,595 |
| Prepaid expense and other current assets | 2,028 | 2,289 |
| Total current assets | 3,347 | 6,884 |
| Other assets | 441 | 431 |
| Total assets | $ 3,788 | $ 7,315 |
| **LIABILITIES AND STOCKHOLDERS' DEFICIT** | | |
| Current liabilities: | | |
| Accounts payable | $ 6,265 | $ 4,632 |
| Accrued and other current liabilities | 5,296 | 4,714 |
| Accrued clinical site costs | 491 | 524 |
| Convertible note payable and accrued interest | 6,779 | 9,161 |
| Warrant liabilities | 26 | 17 |
| Total liabilities | $ 18,857 | $ 19,048 |
| | | |
| Commitments and Contingencies (Note 8) | | |
| | | |
| Stockholders' deficit: | | |
| Preferred stock, $0.001 par value, 50,000,000 shares authorized; | $ — | $ — |
| Series A convertible preferred stock, $0.001 par value, 12,000,000 shares authorized; 0 and 3,000,000 shares issued and outstanding at March 31, 2024 and December 31, 2023, respectively | — | 3 |
| Common stock, $0.001 par value, 500,000,000 shares authorized; 9,772,672 and 8,391,940 shares issued and outstanding at March 31, 2024 and December 31, 2023, respectively | 10 | 8 |
| Additional paid-in capital | 244,599 | 241,406 |
| Accumulated other comprehensive loss | (3) | (3) |
| Accumulated deficit | (259,675) | (253,147) |
| Total stockholders' deficit | (15,069) | (11,733) |
| Total liabilities and stockholders' deficit | $ 3,788 | $ 7,315 |

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

**NRX PHARMACEUTICALS, INC.**

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

| | Three months ended March 31, | |
|---|---|---|
| | 2024 | 2023 |
| Operating expense: | | |
| Research and development | $ 1,748 | $ 3,650 |
| General and administrative | 4,250 | 5,785 |
| Total operating expenses | 5,998 | 9,435 |
| Loss from operations | (5,998) | (9,435) |
| Other (income) expense: | | |
| Interest income | (27) | (156) |
| Interest expense | 230 | — |
| Change in fair value of convertible note payable | 318 | 1,772 |
| Change in fair value of warrant liabilities | 9 | (12) |
| Total other expense | 530 | 1,604 |
| Net loss | $ (6,528) | $ (11,039) |
| Comprehensive (income) loss: | | |
| Change in fair value of convertible note attributed to credit risk | — | (106) |
| Other comprehensive income | — | (106) |
| Comprehensive loss | $ (6,528) | $ (10,933) |
| Net loss per share: | | |
| Basic and diluted | $ (0.74) | $ (1.66) |
| Weighted average common shares outstanding: | | |
| Basic and diluted | 8,852,286 | 6,647,391 |

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

**NRX PHARMACEUTICALS, INC.**

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

| | Preferred Stock | | Series A Preferred Stock | | Common Stock | | Additional Paid-in- | Accumulated | Accumulated Other Comprehensive | Total Stockholders' |
|---|---|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Shares | Amount | Shares | Amount | Capital | Deficit | Loss | Deficit |
| **Balance December 31, 2023** | **—** | **$ —** | **3,000,000** | **$ 3** | **8,391,940** | **$ 8** | **$ 241,406** | **$ (253,147)** | **$ (3)** | **$ (11,733)** |
| Stock-based compensation | — | — | — | — | — | — | 242 | — | — | 242 |
| Conversion of Series A preferred stock into common stock | — | — | (3,000,000) | (3) | 300,000 | — | 3 | — | — | — |
| At-the-market "ATM" offering, net of offering costs $48 | — | — | — | — | 34,584 | | 179 | — | — | 179 |
| Common stock and warrants issued, net of issuance costs $481 | — | — | — | — | 575,000 | 1 | 1,343 | — | | 1,344 |
| Common stock and warrants issued in private placement (270,000 common stock shares to be issued) | — | — | — | — | 270,000 | — | 1,027 | — | — | 1,027 |
| Warrants issued pursuant to the Alvogen Agreement amendment (see Note 6) | — | — | — | — | — | — | — | — | — | — |
| Vesting of restricted stock awards | — | — | — | — | 57,500 | — | — | — | — | — |
| Shares issued as repayment of principal and interest for convertible note | — | — | — | — | 143,648 | 1 | 399 | — | — | 400 |
| Net loss | — | — | — | — | — | — | — | (6,528) | — | (6,528) |
| **Balance - March 31, 2024** | **—** | **$ —** | **—** | **$ —** | **9,772,672** | **$ 10** | **$ 244,599** | **$ (259,675)** | **$ (3)** | **$ (15,069)** |

| | Preferred Stock | | Series A Preferred Stock | | Common Stock | | Additional Paid-in- | Accumulated | Accumulated Other Comprehensive | Total Stockholders' |
|---|---|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Shares | Amount | Shares | Amount | Capital | Deficit | Income | Equity (Deficit) |
| **Balance - December 31, 2022** | **—** | **$ —** | **—** | **$ —** | **6,644,299** | **$ 7** | **$ 230,399** | **$ (222,997)** | **$ —** | **$ 7,409** |
| Common stock and warrants issued, net of issuance costs $351 | — | — | — | — | 386,667 | — | 2,545 | — | — | 2,545 |
| Change in fair value of convertible note attributed to credit risk | — | — | — | — | — | — | — | — | 106 | 106 |
| Stock-based compensation | — | — | — | — | — | — | 695 | — | — | 695 |
| Net loss | — | — | — | — | — | — | — | (11,039) | — | (11,039) |
| **Balance - March 31, 2023** | **—** | **$ —** | **—** | **$ —** | **7,030,966** | **$ 7** | **$ 233,639** | **$ (234,036)** | **$ 106** | **$ (284)** |

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

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

| | Three months ended March 31, | |
|---|---|---|
| | **2024** | **2023** |
| **CASH FLOWS FROM OPERATING ACTIVITIES:** | | |
| Net loss | $ (6,528) | $ (11,039) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation expense | 1 | 1 |
| Stock-based compensation | 242 | 695 |
| Change in fair value of warrant liabilities | 9 | (12) |
| Change in fair value of convertible promissory note | 318 | 1,772 |
| Changes in operating assets and liabilities: | | |
| Prepaid expense and other assets | 250 | 491 |
| Accounts payable | 2,091 | 1,698 |
| Accrued expense and other liabilities | (54) | 305 |
| Net cash used in operating activities | (3,671) | (6,089) |
| **CASH FLOWS FROM INVESTING ACTIVITIES** | | |
| Purchase of computer equipment | — | (4) |
| Net cash used in investing activities | — | (4) |
| **CASH FLOWS FROM FINANCING ACTIVITIES** | | |
| Repayment of convertible note | (2,155) | — |
| Proceeds from issuance of common stock and warrants, net of issuance costs | 1,523 | — |
| Proceeds from issuance of common stock and warrants issued in private placement, net of issuance costs | 1,027 | 2,545 |
| Net cash provided by financing activities | 395 | 2,545 |
| | | |
| **Net decrease in cash and cash equivalents** | (3,276) | (3,548) |
| Cash and cash equivalents at beginning of period | 4,595 | 20,054 |
| Cash and cash equivalents at end of period | $ 1,319 | $ 16,506 |
| **Supplemental disclosure of cash flow information:** | | |
| Cash paid for interest | $ 374 | $ — |
| Cash paid for taxes | $ — | $ — |
| *Non-cash investing and financing activities* | | |
| Issuance of common stock as principal and interest repayment for convertible notes | $ 400 | $ — |
| Issuance of common stock warrants as offering costs | $ 84 | $ — |
| Conversion of Series A preferred stock into common stock | $ 3 | $ — |
| Warrants issued pursuant to the Alvogen Agreement amendment | $ 1,336 | $ — |

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

**NRX PHARMACEUTICALS, INC.**
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS**
**March 31, 2024**
**(Unaudited)**

## 1. Organization

***The Business***

NRx Pharmaceuticals, Inc. (Nasdaq: NRXP) ("*NRX*" or the *"Company"*) is a clinical-stage bio-pharmaceutical company which develops and will distribute, through its wholly-owned operating subsidiaries, NeuroRx, Inc., ("*NeuroRx*") and HOPE Therapeutics, Inc. ("*HOPE*", and collectively with NRX and NeuroRx, the "*Company*", "*we*", "*us*", or "*our*"), novel therapeutics for the treatment of central nervous system disorders including suicidal depression, chronic pain, and post-traumatic stress disorder ("*PTSD*") and now Schizophrenia. All of our drug development activities are focused on the N-methyl-D-aspartate ("*NMDA*") receptor in the brain and nervous system, a neurochemical pathway that has been disclosed in detail in our annual filings. NeuroRx is organized as a traditional research and development ("*R&D*") company, whereas HOPE is organized as a specialty pharmaceutical company intended to distribute ketamine and other therapeutic options to clinics that serve patients with suicidal depression and PTSD.

***Operations***

The Company's drug development activities have expanded from its original focus on development of NRX-101, a fixed dose combination of D-cycloserine (DCS) and lurasidone for the treatment of suicidal bipolar depression to encompass the development of NRX-101 for the treatment of Chronic Pain and PTSD and the development of intravenous ketamine (NRX-100/HTX-100) for the treatment of suicidal depression. The Company has just signed a Memorandum of Understanding with the Fondation FundaMental in Paris to co-develop an NMDA-targeted disease modifying treatment for schizophrenia. These additional indications have been added as the Company has gained access to clinical trials data funded by governmental entities in France and potentially in the United States which has the potential to afford the Company potential safety and efficacy data on key indications at low cost to shareholders.

## 2. Going Concern

As of March 31, 2024, the Company had $1.3 million in cash and cash equivalents, excluding our access to working capital of $5.1 million from the Alvogen milestone advance, as well as approximately $2.0 million gross proceeds received in April as discussed in Note 14. Additionally, we reduced our corporate indebtedness to Streeterville LLC by $2.2 million by using our cash on hand. With the completion of enrollment in its clinical trial of NRX-101 for bipolar depression, the Company anticipates a reduction in its monthly cash expenditure. Since inception, the Company has experienced net losses and negative cash flows from operations each fiscal year and has a working capital deficit at March 31, 2024. The Company has no revenues and expects to continue to incur operating losses for the foreseeable future and may never become profitable. The Company's ability to support its ongoing capital needs is dependent on its ability to continue to raise equity and/or debt financing, which may not be available on favorable terms, or at all, in order to continue operations.

The Company's ongoing clinical activities continue to generate losses and net cash outflows from operations. The Company plans to pursue additional equity or debt financing or refinancing opportunities in 2024 to fund ongoing clinical activities, to meet obligations under its current debt arrangements and for the general corporate purposes of the Company. Such arrangements may take the form of loans, equity offerings, strategic agreements, licensing agreements, joint ventures or other agreements. The sale of equity could result in additional dilution to the Company's existing shareholders. The Company cannot make any assurances that additional financing will be available to it and, if available, on acceptable terms, or that it will be able to refinance its existing debt obligations which could negatively impact the Company's business and operations and could also lead to a reduction in the Company's operations. The Company will continue to carefully monitor the impact of its continuing operations on the Company's working capital needs and debt repayment obligations. As such, the Company has concluded that substantial doubt exists about the Company's ability to continue as a going concern for a period of at least twelve months from the date of issuance of these condensed consolidated financial statements. The Company may raise substantial additional funds, and if it does so, it may do so through one or more of the following:

issuance of additional debt or equity and/or the completion of a licensing or other commercial transaction for one of the Company's product candidates.

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

**3. Summary of Significant Accounting Policies**

On April 1, 2024, the Company effected a reverse stock split (the "*Reverse Stock Split*") of the Company's common stock, $0.001 par value ("*Common Stock*"), at a ratio of 1-for-10. All historical share amounts, with the exception of the Company's Series A Preferred Stock, disclosed in this Quarterly Report on Form 10-Q have been retroactively adjusted to reflect the Reverse Stock Split. No fractional shares were issued as a result of the Reverse Stock Split, as fractional shares of Common Stock were rounded up to the nearest whole share. See Note 9. Equity for additional information.

***Basis of Presentation and Principles of Consolidation***

The accompanying unaudited interim condensed consolidated 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*") and the rules and regulations of the Securities and Exchange Commission ("*SEC*") 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 consolidated financial statements reflect all adjustments, which include only normal recurring adjustments, necessary for the fair presentation of the consolidated balance sheet, statements of operations and cash flows for the interim periods presented. The results of operations for any interim periods are not necessarily indicative of the results that may be expected for the entire fiscal year or any other interim period.

***Use of Estimates***

The preparation of condensed consolidated 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 consolidated financial statements and the reported amounts of expenses during the reporting period. The most significant estimates in the Company's condensed consolidated financial statements relate to the fair value of the convertible note payable, fair value of stock options and warrants, and the utilization of deferred tax assets. 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***

FASB ASC Topic 820, *Fair Value Measurements* ("*ASC 820*"), 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. Deposits in financial institutions may, from time to time, exceed federally insured limits. As of March 31, 2024 the Company's cash and cash equivalents balance within money market accounts was in excess of the U.S. federally insured limits by $0.8 million. The Company has not experienced any losses on its deposits of cash. The Company maintains a portion of its cash and cash equivalent balances in the form of a money market account with a financial institution that management believes to be creditworthy.

***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.

***Revenue Recognition***

The Company accounts for revenue under FASB ASC Topic 606, *Revenue for Contract with Customers* ("*ASC 606*") or other accounting standards for revenue not derived from customers. Arrangements may include licenses to intellectual property, research services and participation on joint research committees. The Company evaluates the promised goods or services to determine which promises, or group of promises, represent performance obligations. In contemplation of whether a promised good or service meets the criteria required of a performance obligation, the Company considers the stage of research, the underlying intellectual property, the capabilities and expertise of the customer relative to the underlying intellectual property, and whether the promised goods or services are integral to or dependent on other promises in the contract. When accounting for an arrangement that contains multiple performance obligations, the Company must develop judgmental assumptions, which may include market conditions, timelines and probabilities of regulatory success to determine the stand-alone selling price for each performance obligation identified in the contract.

The Company enters into contractual arrangements that may include licenses to intellectual property and research and development services. When such contractual arrangements are determined to be accounted for in accordance with ASC 606, the Company evaluates the promised good or services to determine which promises, or group of promises, represent performance obligations. When accounting for an arrangement that contains multiple performance obligations, the Company must develop judgmental assumptions, which may include market conditions, timelines and probabilities of regulatory success to determine the stand-alone selling price for each performance obligation identified in the contract.

The License Agreement (the "*License Agreement*") with Alvogen Pharma US, Inc., Alvogen, Inc. and Lotus Pharmaceutical Co. Ltd. (collectively, "*Alvogen*") (as further discussed in Note 6 below) is accounted for in accordance with ASC 606. In

accordance with ASC 606, the Company recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the Company expects to receive in exchange for those goods or services. To determine revenue recognition for arrangements that the Company determines are within the scope of ASC 606, it performs the following five steps:

i. identify the contract(s) with a customer;
ii. identify the performance obligations in the contract;
iii. determine the transaction price;
iv. allocate the transaction price to the performance obligations within the contract; and
v. recognize revenue when (or as) the entity satisfies a performance obligation.

The Company only applies the five-step model to contracts when it determines that it is probable it will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer.

At contract inception, once the contract is determined to be within the scope of ASC 606, the Company assesses the goods or services promised within the contract to determine whether each promised good or service is a performance obligation. The promised goods or services in the Company's arrangements typically consist of a license to intellectual property and research services. The Company may provide options to additional items in such arrangements, which are accounted for as separate contracts when the customer elects to exercise such options, unless the option provides a material right to the customer. Performance obligations are promises in a contract to transfer a distinct good or service to the customer that (i) the customer can benefit from on its own or together with other readily available resources, and (ii) is separately identifiable from other promises in the contract. Goods or services that are not individually distinct performance obligations are combined with other promised goods or services until such combined group of promises meet the requirements of a performance obligation.

The Company determines transaction price based on the amount of consideration the Company expects to receive for transferring the promised goods or services in the contract. Consideration may be fixed, variable, or a combination of both. At contract inception for arrangements that include variable consideration, the Company estimates the probability and extent of consideration it expects to receive under the contract utilizing either the most likely amount method or expected amount method, whichever best estimates the amount expected to be received. The Company then considers any constraints on the variable consideration and includes in the transaction price variable consideration to the extent it is deemed probable that a significant reversal in the amount of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is subsequently resolved.

The Company then allocates the transaction price to each performance obligation based on the relative standalone selling price and recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) control is transferred to the customer and the performance obligation is satisfied. For performance obligations which consist of licenses and other promises, the Company utilizes judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress. The Company evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition.

The Company records amounts as accounts receivable when the right to consideration is deemed unconditional. When consideration is received, or such consideration is unconditionally due, from a customer prior to transferring goods or services to the customer under the terms of a contract, a contract liability is recorded as deferred revenue.

The Company's revenue arrangements include the following:

Milestone Payments: At the inception of an agreement that includes milestone payments, the Company evaluates each milestone to determine when and how much of the milestone to include in the transaction price. The Company first estimates the amount of the milestone payment that the Company could receive using either the expected value or the most likely amount approach. The Company primarily uses the most likely amount approach as that approach is generally most predictive for milestone payments with a binary outcome. Then, the Company considers whether any portion of that estimated amount is subject to the variable consideration constraint (that is, whether it is probable that a significant reversal of cumulative revenue would not occur upon resolution of the uncertainty.) The Company updates the estimate of variable

consideration included in the transaction price at each reporting date which includes updating the assessment of the likely amount of consideration and the application of the constraint to reflect current facts and circumstances.

Royalties: For arrangements that include sales-based royalties, including milestone payments based on a level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company will recognize revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied).

Research Services: The Company is incurring research costs in association with the License Agreement. After the First Milestone Payment (as defined in Note 6 below), the Company will be reimbursed for certain costs incurred related to reasonable and documented out-of-pocket costs for clinical and non-clinical development activities. The Company will recognize revenue for the reimbursed costs when the First Milestone Payment contingencies have been achieved and the Company has an enforceable claim to the reimbursed costs.

See Note 6, "*Alvogen Licensing Agreement*", for further information on the application of ASC 606 to the License Agreement.

***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.

***Non-cancellable Contracts***

The Company may record certain obligations as liabilities related to non-cancellable contracts. If appropriate the offsetting costs may be recorded as a deferred cost asset.

***Note Payable***

As permitted under FASB ASC Topic 825, Financial Instruments ("*ASC 825*"), the Company elected to account for its promissory note, which meets the required criteria, at fair value at inception. Subsequent changes in fair value are recorded as a component of non-operating loss in the consolidated statements of operations. The portion of total changes in fair value of the note attributable to changes in instrument-specific credit risk are determined through specific measurement of periodic changes in the discount rate assumption exclusive of base market changes and are presented as a component of comprehensive income in the accompanying condensed consolidated statements of operations and comprehensive loss. As a result of electing the fair value option, direct costs and fees related to the promissory notes are expensed as incurred.

The Company estimates the fair value of the note payable using a Monte Carlo simulation model, which uses as inputs the fair value of its Common Stock and estimates for the equity volatility and volume volatility of its Common Stock, the time to expiration (i.e. expected term) of the note, the risk-free interest rate for a period that approximates the time to expiration, and probability of default. Therefore, the Company estimate its expected future equity and volume volatility based on the historical volatility of both its Common Stock price and Common Stock trading volume utilizing a lookback period consistent with the time to expiration. The time to expiration is based on the contractual maturity date, giving consideration to the mandatory and potential accelerated redemptions beginning six months from the issuance date. The risk-free interest rate is determined based on the U.S. Treasury yield curve in effect at the time of measurement for time periods approximately equal to the time to expiration. Probability of default is estimated using Bloomberg's Default Risk function which uses its financial information to calculate a default risk specific to the Company. Interest expense is included within the fair value of the note payable. Management believes those assumptions are reasonable but if these assumptions change, it could materially affect the fair value.

***Stock-Based Compensation***

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

***Warrants***

The Company accounts for warrants as either equity-classified or liability-classified instruments based on an assessment of the warrant's specific terms and applicable authoritative guidance in FASB ASC Topic 480, *Distinguishing Liabilities from Equity* ("*ASC 480*") and FASB ASC Topic 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 Private Placement Warrants (as defined below) was estimated using a Black Scholes valuation approach and the fair value of the Substitute Warrants (as defined below) 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).

***Modification of Warrants***

A change in any of the terms or conditions of warrants is accounted for as a modification. 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.

***Preferred Stock***

In accordance with ASC 480, the Company's Series A Preferred Stock was classified as permanent equity as it was not mandatorily redeemable upon an event that is considered outside of the Company's control. Further, in accordance with ASC 815-40, *Derivatives and Hedging – Contracts in an Entity's Own Equity*, the Series A Preferred Stock did not meet any of the criteria that would preclude equity classification. The Company concluded that the Series A Preferred Stock was more akin to an equity-type instrument than a debt-type instrument, therefore the conversion features associated with the convertible preferred stock were deemed to be clearly and closely related to the host instrument and were not bifurcated as a derivative under ASC 815.

***Income Taxes***

Income taxes are recorded in accordance with FASB ASC Topic 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***

The Company applies the two-class method when computing net income or loss per share attributable to common stockholders as the Company has issued securities that meet the definition of participating securities (See Note 9). In determining net income or loss attributable to common stockholders, the two-class method requires income or loss allocable to participating securities for the period to be allocated between common and participating securities based on their respective rights to share in the earnings as if all of the income or loss allocable for the period had been distributed. In periods of net loss, there is no allocation required under the two-class method as the participating securities do not have an obligation to fund the losses of the Company.

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

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

| | Three months ended March 31, | |
|---|---|---|
| | 2024 | 2023 |
| Stock options | 175,437 | 254,885 |
| Restricted stock awards | 66,666 | 100,000 |
| Common stock warrants | 4,034,337 | 3,321,499 |

***Recent Accounting Pronouncements***

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and are adopted by the Company as of the specified effective date. For the three months ended March 31, 2024, there were no new accounting pronouncements or updates to recently issued accounting pronouncements that management believes materially affect the Company’s present or future results of operations, overall financial condition, liquidity or disclosures.

**4. Prepaid Expense and Other Current Assets**

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

| | March 31, 2024 (Unaudited) | December 31, 2023 |
|---|---|---|
| Prepaid expense and other current assets: | | |
| Prepaid clinical development costs | $ 823 | $ 871 |
| Prepaid insurance | 638 | 1,078 |
| Other prepaid expense | 433 | 334 |
| Other current assets | 128 | — |
| Other current receivables | 6 | 6 |
| Total prepaid expense and other current assets | $ 2,028 | $ 2,289 |

**5. Accrued and Other Current Liabilities**

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

| | March 31, 2024 (Unaudited) | December 31, 2023 |
|---|---|---|
| Accrued and other current liabilities: | | |
| Professional services | $ 2,766 | $ 2,686 |
| Accrued research and development expense | 992 | 1,112 |
| Accrued employee costs | 959 | 835 |
| Other accrued expense | 579 | 81 |
| Total accrued and other current liabilities | $ 5,296 | $ 4,714 |

**6. Alvogen Licensing Agreement**

On June 2, 2023, the Company entered into the License Agreement with Alvogen. The Company and Alvogen are referred to below individually as a "*Party*" and collectively as the "*Parties*."

*License Grant*

Under the License Agreement, the Company granted Alvogen an exclusive (even as to the Company and its affiliates) worldwide, transferable and sublicensable license under certain intellectual property (including patents, know-how and trademarks) owned or controlled by the Company to develop (with certain limitations), manufacture, and commercialize the Company's candidate therapeutic product, NRX-101, for the treatment of bipolar depression with suicidality. The term of the license is, on a country-by-country basis, 20 years from the first commercial sale of NRX-101 in such country, extendable by Alvogen for a two-year period upon its request made prior to the expiration of such 20-year period. During the term of the License Agreement, the Parties agree (on behalf of themselves and their affiliates) not to research, develop, seek or obtain any regulatory approval for the manufacturing, marketing, sale, or other commercialization of any product containing a fixed dose combination of D-cycloserine and lurasidone in the treatment of bipolar depression with suicidality, nor to authorize or assist (including by investing in or otherwise providing funding to) any third party to do so.

During the term, the Company is permitted to develop additional products containing D-cycloserine in combination with one or more other active antidepressant or antipsychotic ingredients for use outside of the field of treatment of bipolar depression with suicidality, such as in post-traumatic stress disorder (PTSD) or chronic pain in depression, in which case, if the Company wishes to license rights to develop or commercialize such additional products or indications, Alvogen has a right of first negotiation to obtain such a license.

*Term and Termination*

The License Agreement will remain in force until the earlier to occur of (i) 20 years following the first commercial sale of NRX-101 on a country-by-country basis (which may be extended for a two-year period at Alvogen's request), and (ii) the date that the agreement is terminated under its early termination provisions. Early termination grounds include, subject to applicable cure periods, a material breach of agreement by the other Party, the bankruptcy or insolvency of the other Party, or a party's reasonable belief that there is an unacceptable risk for harm in humans based upon preclinical safety data or the observation of serious adverse effects in humans.

In addition, Alvogen has the right to early termination if (i) the phase 2 study relating to NRX-101 is not completed and/or a successful read out from the study does not occur by March 31, 2024, or (ii) there is no completion of a Type B meeting with the Federal Drug Administration ("*FDA*") by March 31, 2024. Alvogen may also terminate upon sixty (60) days' prior written notice to the Company at any time after the First Milestone Payment (as defined below) has been made. The Company also has the right to terminate the License Agreement if the current phase 2 study successfully concludes prior to March 31, 2024 and the Type B meeting with the FDA is completed by March 31, 2024 and Alvogen does not notify the Company within 60 days that it wishes to proceed with the development of NRX-101 or has not paid the First Milestone Payment. To-date, the Parties have not elected to their early termination rights.

Upon expiration or termination of the License Agreement, the intellectual property rights licensed to Alvogen under the License Agreement will revert to the Company, and all other rights and obligations of each of the parties will immediately cease, except for outstanding amounts owed as of the time of such expiration or termination. Upon termination, Alvogen will grant to the Company an exclusive irrevocable, perpetual, worldwide, royalty-bearing, sublicensable, transferrable license under the NDA rights to develop, manufacture, have manufactured, or commercialize the product in the field of bipolar depression with suicidality. Such reversion license would be granted by Alvogen to the Company in exchange for an equitable royalty payable by the Company to Alvogen that would be negotiated and agreed in good faith by the parties within 30 business days of such matter being presented to them.

*Milestone Payments*

In exchange for the license grant and the participation of the Company in the development, regulatory and commercial activities described below, Alvogen was obligated to pay the Company an initial $9 million cash payment upon the later of a positive data read-out from the Company's ongoing Phase 2b/3 clinical trial and completion of the Type B meeting with the FDA (the "*First Milestone Payment*"). In February 2024, the parties executed an amendment accelerating payment of $5 million related to the First Milestone Payment, with the remaining $4 million due upon the original agreement's terms. As compensation for advancing the milestone, Alvogen and Lotus will receive warrants to purchase up to 419,598 shares of the Company's Common Stock, at a strike price of $4.00 with a three year term (See Note 9). The grant date fair value of the warrants was approximately $1.3 million, which the Company accounts for as consideration paid to a customer. The second portion of the first milestone will be $4 million and, as before, be triggered by a positive response to the Company's planned end of phase 2 meeting with FDA. A second milestone payment of $5 million (the "*Approval Payment*") is due upon Alvogen's receipt of a copy of the FDA's notice of NDA Approval for Product with the label indication for the treatment of bipolar depression with sub-acute or acute suicidality. Additional bonus milestone payments of increasing amounts up to $315 million will be payable upon the achievement of net sales targets measured over the trailing four quarters. Alvogen also will pay royalties (as described below) to the Company based on the net sales of NRX-101, with a reduction in royalties on a country-by-country basis upon expiration or termination of the Company's patent protection on the NRX-101 composition.

If the first milestone is not achieved by September 3, 2024, the Company will be obligated to repay any amount received against the $5 million advance of the First Milestone Payment to Alvogen. As there is significant uncertainty relative to approval of any drug candidate in development, the Company concluded that it is not probable that a significant reversal of revenue will not occur if the Company were to include the First Milestone Payment, or any advances thereof, in the transaction price prior to receiving FDA approval. Accordingly, the transaction price is fully constrained and advances from Alvogen are recorded as a refund liability until such time as the refund right expires. Further, the Company will account for the warrants issued to Alvogen and Lotus consistent with the accounting for unfunded stock subscription agreements until such time as the uncertainty around the First Milestone is resolved. As of March 31, 2024, the refund liability was $0.5 million, which is included as a component of other current liabilities on the Company's condensed consolidated balance sheets.

*Royalties*

Subject to certain adjustments for sublicensing and other deductions, commencing on the first commercial sale of NRX-101, Alvogen has agreed to pay to the Company tiered royalties calculated on the basis of a percentage, ranging from the low to mid-teens, of annual net sales of NRX-101 measured over the trailing four quarters. In addition, if Alvogen sublicenses NRX-101 in any country other than the U.S. (in which the royalty rates described above will apply), Alvogen will pay the Company a percentage of any and all consideration received by Alvogen or its affiliates from sublicensing any of the rights granted.

*Development and Regulatory Activities*

Prior to payment of the First Milestone Payment by Alvogen to the Company, each Party has agreed to perform, at its own cost, certain development activities using diligent efforts and in accordance with applicable then-current good manufacturing and other applicable practices, laws and regulations, with the goal of supporting the preparation and filing of an NDA and obtaining regulatory approval for NRX-101. Until the payment of the First Milestone Payment, the Company has the sole right to control and responsibility for all regulatory matters relating to NRX-101, at its sole cost and expense, and the Company shall own all regulatory materials and own all worldwide regulatory approvals for NRX-101.

After the payment of the First Milestone Payment, Alvogen has the sole right and responsibility, at its cost and expense, for all regulatory matters relating to NRX-101, and Alvogen will own all regulatory materials and all regulatory approvals for the product in the licensed territory (and the Company will assign all of its rights in any regulatory materials to Alvogen). Each party has committed to reasonably cooperate with the other in carrying out the development and regulatory activities outlined in the development plan. In addition, Alvogen has agreed to fund the next registrational study of NRX-101 in the field of treatment of bipolar depression with suicidality.

Upon NDA approval of the product in the U.S., Alvogen has agreed to use diligent efforts to commercialize NRX-101 in the U.S., and, for 24 months following such approval, in other countries in the territory upon regulatory approval in each such country. If Alvogen does not commercialize NRX-101 in a country outside of the U.S. in the foregoing 24-month period, then the license may revert back to the Company with respect to such country and the Company would pay Alvogen tiered royalties in the low to mid-teens based on net sales of NRX-101 in such country. The Parties will also enter into a pharmacovigilance agreement to ensure compliance with safety reporting requirements of all applicable regulatory agencies globally with respect to the commercialization of NRX-101.

*Commercial Activities*

Under the License Agreement, the Company is responsible for and will control the manufacturing of the NRX-101 commercial product and for qualification and regulatory-related activities necessary for the manufacture of the product. The Parties intend to enter into a clinical supply agreement (and a related quality agreement) on reasonable and customary terms, in which the Company will supply Alvogen raw materials and/or finished product without any markup to the future supply price from the Company's current contract manufacturer. Similarly, prior to initiation of the first Phase 3 study for the commercial product, the Parties will enter into a commercial supply agreement (and a related quality agreement) on reasonable and customary terms, in which the Company will supply Alvogen raw materials and/or finished product without any markup to the future supply price from NRx's current contract manufacturer. At any time after NDA approval, Alvogen may elect to manufacture, fill and package the product itself or through a third-party supplier subject to the prior approval of the Company. In such case, the parties may also work together to establish a written manufacturing technology transfer plan to transfer manufacturing technology from the Company or the Company's contract manufacturer to Alvogen or Alvogen's designated third party supplier. The Company has agreed, as a part of its manufacturing commitments, to make available its qualified technical personnel to consult with Alvogen to complete transfer of the manufacturing technology if required under the License Agreement.

Following NDA approval, Alvogen will control and be responsible for advertising, marketing, promotion and marketing, pricing, and terms of sale for the product, all at Alvogen's sole expense. Alvogen has committed to not shift, allocate, price or discount sales of the product for the purpose of reducing or disadvantaging the net sales of the product in order to reduce the payments owed by Alvogen to the Company under the License Agreement.

As of March 31, 2024, the Company has not achieved any milestones nor recognized any revenue associated with the License Agreement.

**7. Debt**

***Convertible Note***

On November 4, 2022, the company issued an 9% redeemable promissory note (as amended, the "*Note*") to Streeterville Capital, LLC, a Utah limited liability company ("*Streeterville*"), for an aggregate principal amount of $11.0 million. The Note matures 18 months from the date of issuance subject to certain acceleration provisions. The Note carries an original issue discount of $1.0 million which was deducted from the principal balance of the Note. The net proceeds from the issuance of the Note was $10.0 million after transaction costs including the original issue discount, legal and other fees are included.

The initial terms of the Note included the following provisions, certain of which have subsequently been modified as described below. 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 $1.0 million of the outstanding balance of the Note per month starting six months after the issuance date (the "*Maximum Monthly Redemption Amount*"). Payments may be made by the Company at their option in: (i) in cash with a 10% premium (the "*Redemption Premium*") for the amount redeemed, (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 the lender will be entitled to redeem over the following ten (10) trading days an amount of indebtedness then outstanding under the Note equal to twice the monthly redemption amount of $1.0 million solely by payment by stock, if permitted under the agreement, subject to the Maximum Percentage (as defined in the Note) and other ownership limitations.

The Note contains certain Trigger Events (as defined in the Note) that generally, if uncured within five trading days, may result in an event of default in accordance with the terms of the Notes (such event, an "*Event of Default*"). Upon an Event of a Default, the Lender may consider the Note immediately due and payable. Upon an Event of Default, the interest rate may also be increased to the lesser of 18% per annum or the maximum rate permitted under applicable law. On April 24, 2024, the Company received written notice from counsel for Streeterville Capital that an alleged Event of Default occurred with respect to the Note. Refer to Note 14 for more information regarding the alleged Event of Default.

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

*Convertible Note Amendments*

On March 30, 2023, the Company entered into an Amendment to the Note (the "*First Amendment*"), pursuant to which the Maximum Percentage was set at 9.99% of the number of shares of Common Stock outstanding on a given date.

On July 7, 2023, the Company entered into Amendment #2 to the Note with Streeterville (the "*Second Amendment*"). Pursuant to the Second Amendment, the Company agreed to amend the redemption provisions of the Note to provide that the Company would pay to Streeterville an amount in cash equal to $1.8 million on or before July 10, 2023, which amount was paid on July 10, 2023. In addition, the Company agreed that, beginning on or before July 31, 2023, and on or before the last day of each month until December 31, 2023 (the Company would pay Streeterville an amount equal to $0.4 million in cash), less any amount satisfied by the delivery of Redemption Conversion Shares (as defined below). Notwithstanding the foregoing, Streeterville may also submit a request for redemption of up to an aggregate of $1.0 million per month in

accordance with the terms of the note amendment. However, the portion of each payment that is not satisfied by the delivery of Redemption Conversion Shares is the maximum amount of cash the Company will be required to pay in accordance with the Second Amendment during the period from July 31, 2023 and on or before the last day of each month until December 31, 2023. The redemption of the Maximum Monthly Redemption Amount in excess of the Minimum Amount may be satisfied by the delivery of additional Redemption Conversion Shares.

On February 9, 2024, the Company entered into Amendment #3 to the Note (the "*Third Amendment*"), with Streeterville. In accordance with the Third Amendment, the Company and Streeterville agreed to amend the redemption provisions of the Note to provide that the Company would pay to Streeterville an amount in cash equal to $1.1 million on February 12, 2024, which the amount was paid on February 12, 2024. In addition, beginning on or before February 29, 2024, and on or before the last day of each month until July 31, 2024, the Company shall pay Streeterville an amount equal to $0.4 million in cash, less any amount satisfied by the delivery of Redemption Conversion Shares. During the first three months of this amended payment period, Streeterville may not request to redeem amounts greater than $0.4 million per month.

After April 30, 2024, and for the remainder of the payment period through July 31, 2024, Streeterville may redeem any Redemption Amount (as defined in the Note), including an amount in excess of the Minimum Payment, subject to the Maximum Monthly Redemption Amount. During the period through July 31, 2024, the Company is permitted to pay the Redemption Amounts by delivery of the Redemption Conversion Shares (as defined below) without regard to the existence of any Equity Conditions Failure, to the extent Streeterville submits redemption notices during such month pursuant to the terms of the Note, and only for the Redemption Amounts covered by such notices. Moreover, the Redemption Premium will continue to apply to the Redemption Amounts. To the extent there is an outstanding balance under the Note after July 31, 2024, the Company will be required to pay such outstanding balance in full in cash by August 31, 2024.

During the Minimum Payment Period (defined in the Note, as amended), the Company is permitted to pay the Redemption Amounts in the form of shares of Common Stock of the Company (the "*Redemption Conversion Shares*") calculated on the basis of the Redemption Conversion Price (as defined in the Note) without regard to the existence of an Equity Conditions Failure. Moreover, the Redemption Premium (as defined in the Note) will continue to apply to the Redemption Amounts.

Both the Second Amendment and the Third Amendment (considered cumulatively with the Second Amendment) were deemed to be debt modifications in accordance with FASB ASC Topic 470, Debt, which will be accounted for prospectively. The modification does not result in recognition of a gain or loss in the consolidated statement of operations but does impact interest expense recognized in future periods.

*Convertible Note Fair Value Measurements*

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

The discount to the principal amount is included in the carrying value of the Note. During 2022, the Company recorded a debt discount of approximately $1.0 million upon issuance of the Note for the original issue discount of $1.0 million. As a result of electing the fair value option, any direct costs and fees related to the Note were expensed as incurred. For the three months ended March 31, 2024 and 2023, the Company recorded a loss from the change in fair value of the Note of $0.3 million and $1.7 million, respectively, which was recognized in other (income) expense on the Consolidated Statement of Operations as a result of the Company's election of the fair value option.

During the three months ended March 31, 2024, the Company made cash payments for coupon interest on the Note of approximately $0.1 million, and $0.2 million of redemption premiums, and issued shares of Common Stock as coupon interest repayment of $0.1 million. During the three months ended March 31, 2024, the Company made cash principal

repayments on the Note of approximately $2.2 million and issued shares of Common Stock as principal repayment of $0.3 million.

During the three months ended March 31, 2023, the Company made no payments on the Note.

As of March 31, 2024, and December 31, 2023, the Note carried a remaining principal balance of $5.4 million and $8.3 million, respectively. Refer to Note 11 for the reconciliation of the fair values for the periods presented and Note 14 Subsequent Events.

**8. Commitments and Contingencies**

***Sarah Herzog Memorial Hospital License Agreement***

The Company is required to make certain payments in order to maintain the license agreement with the Sarah Herzog Memorial Hospital Ezrat Nashim ("*SHMH*"), including:

*Milestone Payments*

| | | |
|---|---|---|
| End of Phase I Clinical Trials of Licensed Product | $ | 100,000 |
| End of Phase II Clinical Trials of Licensed Product | $ | 250,000 |
| End of Phase III Clinical Trials of Licensed Product | $ | 250,000 |
| First Commercial Sale of Licensed Product in U.S. | $ | 500,000 |
| First Commercial Sale of Licensed Product in Europe | $ | 500,000 |
| Annual Revenues Reach $100,000,000 | $ | 750,000 |

The milestone payments due above may be reduced by 25% in certain circumstances, and by the application of certain sub-license fees. During the three months ended March 31, 2024 and 2023, no payments were made.

*Royalties*

A royalty in an amount equal to: (a) 1% of revenues from the sale of any product incorporating a Licensed Product when at least one Licensed Patent remains in force, if such product is not covered by a Valid Claim (as defined below) in the country or region in which the sale occurs, or (b) 2.5% of revenues from the sale of any Licensed Product that is covered by at least one Valid Claim in the country or region in which such product is manufactured or sold. A "Valid Claim" means any issued claim in the Licensed Patents that remains in force and that has not been finally invalidated or held to be unenforceable. The royalty rates above may be doubled if we commence a legal challenge to the validity, enforceability or scope of any of the Licensed Patents during the term of the SHMH License Agreement and do not prevail in such proceeding.

Royalties shall also apply to any revenues generated by sub-licensees from sale of Licensed Products subject to a cap of 8.5% of the payments received by us from sub-licensees in connection with such sales.

*Annual Maintenance Fee*

A fixed amount of $100,000 was paid on April 16, 2021 and, thereafter, a fixed amount of $150,000 is due on the anniversary of such date during the term of the SHMH License Agreement.

***Exclusive License Agreement***

The Company has entered into a License Agreement with Apkarian Technologies to in-license US Patent 8,653,120 that claims the use of D-cycloserine for the treatment of chronic pain in exchange for a commitment to pay milestones and royalties as development milestones are reached in the field of chronic pain. The patent is supported by extensive nonclinical data and early clinical data that suggest the potential for NMDA antagonist drugs, such as NRX-101 to decrease both chronic pain and neuropathic pain while potentially decreasing craving for opioids. For the three months ended March 31, 2024 and 2023, the Company has recorded $0 and $0.2 million, respectively, worth of expenses relating to the licensure of the patent

recorded in Research and development expenses on the condensed consolidated statements of operations and comprehensive loss.

***Operating Lease***

The Company leases office space on a month-to-month basis. The rent expense for the three months ended March 31, 2024 and 2023 was less than $0.1 million and $0.1 million, respectively.

***Relief Therapeutics Collaboration Agreement***

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

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

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

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

Upon commercial launch of the Product by the Relief Parties or any of their affiliates, licensees or sublicensees (or upon authorization of use for any indication of the Product other than COVID-19), the Company is entitled to receive milestone payments in stages up to an aggregate amount of $13.0 million. The Relief Parties have also agreed to pay royalties to the Company on aggregate net sales of all Products, subject to a cap on royalty payments of $30.0 million in the aggregate. No royalties have been received under this agreement as of March 31, 2024. In addition, Relief is obligated to use commercially reasonable efforts to continue the Company's existing Right to Try Program until December 2024.

Mutual indemnity provisions in the APA will protect each party from any breaches of the settlement arrangements by the other party, provided, that the Company's indemnity obligations will not start until the Relief Parties have begun making royalty or milestone payments to the Company, subject to certain exceptions. With respect to the Company, there is an indemnity threshold such that the Company will not be liable for any indemnity claims until such claims are in excess of $0.5 million (and then only for the amount above $0.5 million). The Company's indemnity obligation is capped at $2.0 million with respect to breaches of representations and warranties and $3.0 million with respects to breaches of covenants or other agreements. Additionally, subject to certain exceptions, the Company's indemnity obligations cannot exceed the amount that the Relief Parties actually pay to the Company for milestone and royalty payments. The parties closed the APA in December 2022 at which time all claims and counterclaims between the Company and the Relief Parties were dismissed with prejudice.

***Legal Proceedings***

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

*Other Legal Actions:*

The Company is currently involved in and may from time to time become involved in various legal actions incidental to our business. As of the date of this report, the Company is not involved in any legal proceedings that it believes could have a material adverse effect on its financial position or results of operations. However, the outcome of any current or future legal proceeding is inherently difficult to predict and any dispute resolved unfavorably could have a material adverse effect on The Company's business, financial position, and operating results.

**9. Equity**

***Common Stock Reverse Stock Split***

On March 21, 2024, the Board approved a reverse stock split ratio of 1 for 10. On March 28, 2024, the Company filed an amendment to its certificate of incorporation in the State of Delaware (the "*Amendment*"), which provides that, effective as of 4:30 p.m. Eastern Standard Time on April 1, 2024 (the "*Effective Time*"), every ten shares of its issued and outstanding Common Stock will automatically be combined into one issued and outstanding share of Common Stock, without any change in the par value per share.

At the Effective Time of April 1, 2024, every 10 issued and outstanding shares of the Company's Common Stock were converted automatically into one share of the Company's Common Stock, without any change in the par value per share. The Reverse Stock Split reduced the number of shares of Common Stock issued and outstanding from approximately 95.7 million to approximately 9.6 million.

No fractional shares were issued in connection with the Reverse Stock Split. Shareholders who otherwise would have been entitled to receive a fractional share instead became entitled to receive one whole share of Common Stock in lieu of such fractional share. All share and per share amounts in the accompanying condensed consolidated financial statements and footnotes have been retrospectively adjusted for the reverse split.

***Preferred Stock***

Pursuant to the terms of the Company's Second Amended and Restated Certificate of Incorporation, the Company has 50,000,000 shares of preferred stock with a par value of $0.001, of which 12,000,000 were designated Series A convertible preferred stock. In August 2023, the Company sold and issued 3.0 million shares of Series A convertible preferred stock for an aggregate cash purchase price of $1.2 million. During March 2024 holders of the Company's Series A convertible preferred stock elected to convert 3,000,000 shares of Series A convertible preferred stock into 300,000 shares of Common Stock. As of March 31, 2024, no shares of Series A convertible preferred stock remained issued or outstanding.

***Common Stock***

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

On January 2, 2024, the Company issued 143,648 shares of Common Stock as payment for the $0.4 million minimum payment to Streeterville related to principal and interest payments on the Streeterville Note.

From February 20, 2024 to March 11, 2024, the Company announced that it entered into multiple purchase agreements (the "*ATM Purchase Agreements*") subject to standard closing conditions where accredited investors purchased 34,584 shares of unregistered Common Stock at a range of $4.643 – $7.10 per share. The final ATM Purchase Agreement closed on March 11, 2024. The aggregate net cash proceeds to the Company from the ATM Purchases Agreements were approximately $0.2 million.

On February 29, 2024, the Company entered into a securities purchase agreement with an investor providing for the issuance and sale of 270,000 shares of Common Stock and warrants to purchase up to 270,000 shares of Common Stock (the "*February Warrants*") at a price of $3.80 per share of Common Stock and accompanying warrant, which represents a 26.7% premium to the offering price in February 2024 Public Offering. The Common Stock and the February Warrants were

offered pursuant to a private placement (the "*February 2024 Private Placement*") under Section 4(a)(2) of the Securities Act of 1933, as amended (the "*Securities Act*"). The aggregate net cash proceeds to the Company from the February 2024 Private Placement were approximately $1.0 million. As of March 31, 2024, the shares of Common Stock had not been issued.

On February 27, 2024, the Company entered into an underwriting agreement (the "*February Underwriting Agreement*") with EF Hutton LLC (the "*Representative*"), as the representative of the several underwriters named therein (the "*February Underwriters*"), relating to an underwritten public offering (the "*February 2024 Public Offering*") of 500,000 shares (the "*February Shares*") of the Company's Common Stock. The public offering price for each share of Common Stock was $3.00 and the February Underwriters purchased the shares of Common Stock pursuant to the February Underwriting Agreement at a price for each share of Common Stock of $2.76. Pursuant to the February Underwriting Agreement, the Company also granted the Representative a 45-day option to purchase up to an additional 75,000 shares (the "*February Option Shares*") of the Common Stock on the same terms as the February Shares sold in the February 2024 Public Offering (the "*February Over-Allotment Option*"). On February 28, 2024, the February 2024 Public Offering closed (the "*February Closing Date*"). The aggregate net cash proceeds to the Company from the February 2024 Offering proceeds were approximately $1.3 million after offering costs of approximately $0.4 million. On March 5, 2024, the February Underwriters of the previously announced underwritten public offering of the Company exercised their option in accordance with the February Underwriting Agreement, dated February 27, 2024, by and between the Company and EF Hutton LLC, as representative of the several underwriters named therein, to purchase up to an additional 75,000 shares of the Company's Common Stock, at a public offering price of $3.00 per share (the "*February Overallotment Exercise*"). The February Overallotment Exercise closed on March 6, 2024. The aggregate net cash proceeds to the Company from the February Overallotment Exercise were approximately $0.2 million. The Company accrued additional offering costs of approximately $0.2 million. The warrants issued to EF Hutton represent participating securities for the purposes of calculating earnings per share as they are entitled to participate in dividends or distributions, to the extent declared by the Company, on a pro rata basis as if they had been exercised immediately before such a dividend or distribution.

***Common Stock Warrants***

Substitute Warrants

In connection with the Merger in 2021, each warrant to purchase shares of Common Stock of NeuroRx that was outstanding and unexercised immediately prior to the effective time (whether vested or unvested) was assumed by BRPA and converted into a warrant, based on the Exchange Ratio (of 0.316), that will continue to be governed by substantially the same terms and conditions, including vesting, as were applicable to the former warrant (the "*Substitute Warrants*"). There were 3,792,970 warrants outstanding and unexercised at the effective time. As these Substitute Warrants meet the definition of a derivative as contemplated in FASB ASC Topic 815, based on provisions in the warrant agreement related to the Earnout Shares Milestone and the Earnout Cash Milestone and the contingent right to receive additional shares for these provisions, the Substitute Warrants were recorded as derivative liabilities on the consolidated balance sheet and measured at fair value at inception (on the date of the Merger) and at each reporting date in accordance with FASB ASC Topic 820, with changes in fair value recognized in the statements of operations in the period of change.

The Company recognized a loss (gain) on the change in fair value of the Substitute Warrants for the three months ended March 31, 2024 and 2023 of less than $0.1 million and less than $0.1 million, respectively. Refer to Note 11 for further discussion of fair value measurement of the warrant liabilities.

Assumed Public Warrants

Prior to the Merger, the Company had 3,450,000 Public Warrants outstanding (the "*Public Warrants*") to purchase up to 345,000 shares of Common Stock. Each Public Warrant entitles the holder to purchase one-tenth share of Common Stock at an exercise price of $115 per share. The Public Warrants became exercisable at the effective time of the Merger and expire five years after the effective time on or earlier upon their redemption or liquidation of the Company.

During the three months ended March 31, 2024 and 2023 no Public Warrants were exercised. The outstanding balance of these warrants remains in equity. At March 31, 2024 and December 31, 2023, there were 3,448,856 Public Warrants outstanding to purchase up to 344,886 shares of Common Stock.

Assumed Private Placement Warrants

Prior to the Merger, the Company had outstanding 136,250 Private Placement Warrants (the "*Private Placement Warrants*") to purchase up to 13,625 shares of Common Stock. The Private Placement Warrants are not indexed to the Company's common shares in the manner contemplated by FASB ASC Topic 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 Private Placement Warrants as derivative liabilities in its condensed consolidated balance sheets as of March 31, 2024 and December 31, 2023. The Company measures the fair value of the Private Placement Warrants at the end of each reporting period and recognizes changes in the fair value from the prior period in the Company's statements of operations for the current period.

The Company recognized a loss (gain) on the change in fair value of the Private Placement Warrants for the three months ended March 31, 2024 and 2023 of less than $0.1 million, respectively. Refer to Note 11 for discussion of the fair value measurement of the Company's warrant liabilities.

Investor Warrants

As discussed above, on February 28, 2024, in conjunction with the sale of 270,000 shares of the Company's Common Stock, the Company issued February Warrants to purchase up to 270,000 shares of Common Stock which were classified in stockholder's equity. The February Warrants have an exercise price of $3.80 per share, are initially exercisable beginning six months following the date of issuance, and will expire 5 years from the date of issuance. The measurement of fair value was determined utilizing a Black-Scholes model considering all relevant assumptions current at the date of issuance (i.e., share price of $3.59, exercise price of $3.80, term of 5 years, volatility of 178.10%, risk-free rate of 4.26%, and expected dividend rate of 0%). The allocated fair value of the warrants on the grant date was $0.5 million and is recorded as a charge to additional paid-in capital.

On February 28, 2024, the Company issued to the Representative the Underwriter's Warrant to purchase up to 25,000 shares of Common Stock (the "*February Underwriter Warrant Shares*"). The Underwriter's Warrant is exercisable six months following the date of the Underwriting Agreement and terminates on the five-year anniversary of the date of the Underwriting Agreement. The measurement of fair value was determined utilizing a Black-Scholes model considering all relevant assumptions current at the date of issuance (i.e., share price of $3.05, exercise price of $3.30, term of 5 years, volatility of 178.10%, risk-free rate of 4.26%, and expected dividend rate of 0%). The allocated fair value of the warrants on the grant date was $0.1 million and is recorded within additional paid-in capital.

On March 5, 2024 the Company issued Underwriter's Warrant to purchase up to 3,750 shares of Common Stock in relation to the exercise of the February Over-Allotment Option. The measurement of fair value was determined utilizing a Black-Scholes model considering all relevant assumptions current at the date of issuance (i.e., share price of $3.05, exercise price of $3.30, term of 5 years, volatility of 178.10%, risk-free rate of 4.12%, and expected dividend rate of 0%). The allocated fair value of the warrants on the grant date was less than $0.1 million and is recorded as a charge to additional paid-in capital.

Alvogen Warrants

In conjunction with the amended Alvogen licensing agreement discussed in Note 6, on February 7, 2024 the Company issued warrants to purchase up to 419,598 shares of Common Stock. The warrants have an exercise price of $4.00 per share, are exercisable immediately following the date of issuance, will expire 3 years from the date of issuance, and may also be exercised on a cashless basis if there is no effective registration statement available for the resale of the shares of Common Stock underlying the warrants. The warrants are subject to a beneficial ownership limitation of 4.99% post-exercise, with the exception that the beneficial ownership limitation may be waived up to a maximum of 9.99% at the election of the holder, with not less than 61 days prior notice. The measurement of fair value was determined utilizing a Black-Scholes model considering all relevant assumptions current at the date of issuance (i.e., share price of $4.10, exercise price of $4.00, term of 3 years, volatility of 138.0%, risk-free rate of 4.2%, and expected dividend rate of 0.0%). The fair value of the warrants on the grant date was $1.3 million and is recorded within additional paid-in capital.

| | Total Warrant Shares | Weighted Average Remaining Term | Weighted Average Exercise Price | Aggregate Intrinsic Value (in thousands) |
|---|---|---|---|---|
| Outstanding as of December 31, 2023 | 3,321,499 | 3.91 | $ 23.01 | $ 180 |
| Issued | 718,348 | | | |
| Expired | (5,510) | | | |
| Outstanding as of March 31, 2024 | 4,034,337 | 3.68 | $ 19.61 | $ 807 |

**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 347,200.

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, based on the Exchange Ratio (of 0.316:1).

Upon the closing of the Merger, the outstanding and unexercised NeuroRx stock options became options to purchase an aggregate 289,542 shares of the Company's Common Stock at an average exercise price of $51.00 per share.

***2021 Omnibus Incentive Plan***

As of March 31, 2024, 955,281 shares of Common Stock are authorized for issuance pursuant to awards under the Company's 2021 Omnibus Incentive Plan (the "*2021 Plan*"). As of January 1, 2023, 66,443 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. On December 28, 2023 the first amendment to the 2021 Omnibus Plan was executed which increased the maximum number of Shares (i) available for issuance under the Plan, by an additional 200,000 Shares, and (ii) that may be delivered pursuant to the exercise of Incentive Stock Options granted under the Plan to be equal to 100% of the Share Pool. As of March 31, 2024, an aggregate 602,365 shares have been awarded net of forfeitures, and 352,916 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 awards 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. 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 an NDA by the FDA for NRX-101, or b) immediately preceding a change in control of the Company, whichever occurs first.

The Company issued no stock options during the three months ended March 31, 2024 and 2023.

The following table summarizes the Company's employee and non-employee stock option activity under the 2021 Plan for the following periods:

| | Number of shares | Weighted average exercise price | Weighted average remaining contractual life (in years) | Aggregate intrinsic value (in thousands) |
|---|---|---|---|---|
| Outstanding as of December 31, 2023 | 264,983 | $ 18.30 | 7.7 | $ 75 |
| Expired/Forfeited | (89,546) | | | |
| Outstanding as of March 31, 2024 | 175,437 | $ 18.60 | 8.4 | $ 40 |
| Options vested and exercisable as of March 31, 2024 | 105,215 | $ 27.61 | 7.6 | $ 1 |

Stock-based compensation expense related to stock options was less than $0.1 million and $0.7 million for the three months ended March 31, 2024 and 2023, respectively.

At March 31, 2024, the total unrecognized compensation related to unvested employee and non-employee stock option awards granted, was $0.3 million, which the Company expects to recognize over a weighted-average period of approximately 1.1 years.

***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, 2023 (unvested) | 124,166 | $ 5.20 |
| Vested | (57,500) | 4.64 |
| Balance as of March 31, 2024 (unvested) | 66,666 | $ 5.66 |

On July 12, 2022, the Board granted an award of 100,000 restricted shares of the Company ("*RSAs*") as an inducement to the newly appointed CEO, pursuant to a separate Restricted Stock Award Agreement. The RSAs will vest in approximately equal installments over three (3) years from the grant date, subject to continued service through the applicable vesting date.

On December 28, 2023, the Company was authorized to grant 57,500 RSAs to a consultant for services provided. The RSAs vested after six months from September 4, 2023, the date the services began. The shares were valued on the grant date based on the quoted price of $4.60 or approximately $0.3 million which will be amortized over the vesting term.

Stock-based compensation expense related to RSAs was $0.2 million and less than $0.1 million for the three months ended March 31, 2024 and 2023, respectively.

As of March 31, 2024, total unrecognized compensation expense related to RSAs was approximately $0.2 million, which is expected to be recognized over a weighted-average period of approximately 1.3 years.

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

| | Three months ended March 31, | |
|---|---|---|
| | 2024 | 2023 |
| | (Unaudited) | |
| Stock-based compensation expense | | |
| General and administrative | $ 211 | $ 591 |
| Research and development | 31 | 104 |
| Total stock-based compensation expense | $ 242 | $ 695 |

**11. Fair Value Measurements**

Fair value measurements discussed herein are based upon certain market assumptions and pertinent information available to management as of and during the three months ended March 31, 2024 and 2023. The carrying amount of accounts payable approximated fair value as they are short term in nature. The fair value of stock options and warrants issued for services are estimated based on the Black-Scholes model. The fair value of the Note was estimated utilizing a Monte Carlo simulation.

***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 convertible note payable represent Level 3 measurements. The following table presents information about the Company's assets and liabilities that are measured at fair value on a recurring basis at March 31, 2024 and December 31, 2023, and indicates the fair value hierarchy of the valuation inputs the Company utilized to determine such fair value (in thousands):

| Description | Level | March 31, 2024 | December 31, 2023 |
|---|---|---|---|
| Assets: | | (Unaudited) | |
| Money Market Account | 1 | $ 566 | $ 3,874 |
| | | | |
| Liabilities: | | | |
| Warrant liabilities (Note 9) | 3 | $ 26 | $ 17 |
| Convertible note payable (Note 7) | 3 | $ 6,779 | $ 9,161 |

***Convertible Note Payable***

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

| | March 31, | |
|---|---|---|
| | 2024 | 2023 |
| Stock price on valuation date | $ 4.70 | $ 6.60 |
| Time to expiration | 0.42 | 1.09 |
| Note market interest rate | 16.5 % | 17.1 % |
| Equity volatility | 135.0 % | 125.0 % |
| Volume volatility | 575 % | 420 % |
| Risk-free rate | 5.40 % | 4.58 % |
| Probability of default | 14.2 % | 14.6 % |

The following table sets forth a summary of the changes in the fair value of the Note categorized within Level 3 of the fair value hierarchy (in thousands):

| | | |
|---|---|---|
| Fair value of the Note as of December 31, 2023 | $ | 9,161 |
| Conversions and repayments of principal and interest (shares and cash) | | (2,700) |
| Fair value adjustment through earnings | | 318 |
| Fair value adjustment through accumulated other comprehensive loss | | — |
| Fair value of the Note as of March 31, 2024 | $ | 6,779 |
| | | |
| Convertible note payable - current portion | $ | 6,779 |
| Convertible note payable, net of current portion | $ | — |

| | | |
|---|---|---|
| Fair value of the Note as of December 31, 2022 | $ | 10,525 |
| Conversions and repayments of principal and interest (shares and cash) | | — |
| Fair value adjustment through earnings | | 1,770 |
| Fair value adjustment through accumulated other comprehensive loss | | (106) |
| Fair value of the Note as of March 31, 2023 | $ | 12,189 |
| | | |
| Convertible note payable - current portion | $ | 12,189 |
| Convertible note payable, net of current portion | $ | — |

***Warrant Liabilities***

The Company utilizes a Black-Scholes model approach to value the Private Placement Warrants and Substitute Warrants at each reporting period, with changes in fair value recognized in the statement of operations. The estimated fair value of the warrant liabilities is determined using Level 3 inputs. There were no transfers between levels within the fair value hierarchy during the periods presented. 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 volatility that matches the expected remaining life of the warrants. The risk-free interest rate is based on the U.S. Treasury zero-coupon yield curve on the grant date for a maturity similar to the expected remaining life of the warrants. The expected life of the warrants is assumed to be equivalent to their remaining contractual term. The dividend rate is based on the historical rate, which the Company anticipates remaining at zero.

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

| | March 31, | |
|---|---|---|
| | 2024 | 2023 |
| Stock price on valuation date | $ 4.70 | $ 6.60 |
| Exercise price per share | $ 115.00 | $ 115.00 |
| Expected life | 2.15 | 3.15 |
| Volatility | 178.1% | 123.6% |
| Risk-free rate | 4.56% | 4.77% |
| Dividend yield | 0.00% | 0.00% |
| Fair value of warrants | $ 1.90 | $ 1.90 |

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

| | | |
|---|---|---|
| Balance as of December 31, 2023 | $ | 17 |
| Loss upon re-measurement | | 9 |
| Balance as of March 31, 2024 | $ | 26 |
| | | |
| Balance as of December 31, 2022 | $ | 37 |
| Gain upon re-measurement | | (12) |
| Balance as of March 31, 2023 | $ | 25 |

**12. Income Taxes**

The Company recorded no provision or benefit for income tax expense for the three months ended March 31, 2024 and 2023, respectively.

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

The Company has no open tax audits with any taxing authority as of March 31, 2024.

**13. Related Party Transactions**

Glytech Agreement

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 the Company. During the three months ended March 31, 2023, the Company paid Glytech $0.1 million, for continuing technology support services and reimbursed expenses. The Company did not make a payment during the three months ended March 31, 2024, 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 the Company. 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 the Company considers "pipeline" or "future product" opportunities, that contain a combination of pharmaceutical components different from those contained in NRX-100 and NRX-101. On November 6, 2022 the Glytech Agreement was amended whereby Glytech agreed to transfer and assign the remainder of the Licensed Technology and the Excluded Technology to the Company for no additional consideration at any time upon receipt of written notice from the Company if, on or prior to March 31, 2024, (i) the value of the Glytech equity holdings in the Company (the "*Glytech Equity*") has an aggregate liquidity value of at least $50 million for twenty (20) consecutive trading days immediately preceding any given date and (ii) there are no legal or contractual restrictions on selling all of the securities represented by the Glytech Equity then applicable to Glytech (or reasonably foreseeable to be applicable to Glytech within the following twenty trading days).

Consulting Agreement with Dr. Jonathan Javitt

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 $0.3 million during the three months ended March 31, 2024 and 2023, respectively.

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

The Javitt Amendment also provides, subject to the approval of the Board of Directors, for a grant of 50,000 shares of restricted stock of the Company under the Company's 2021 Omnibus Incentive Plan. The restrictions are performance based, and half of the restricted shares (25,000) shall have the restrictions removed on the New Drug Application Date (as defined below) and the remaining half (25,000) will have the restrictions removed on the New Drug Approval Date (as defined below). As of March 31, 2024, the Board of Directors has not approved the grant of restricted stock.

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

Consulting Agreement with Zachary Javitt

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 who is responsible for assuring that the services are provided on financial terms that are at market. The Company paid this family member a total of $0.1 million and $0.1 million during the three months ended March 31, 2024 and 2023, respectively. These services are ongoing.

Included in accounts payable were less than $0.1 million and less than $0.1 million due to the above related parties as of March 31, 2024 and December 31, 2023, respectively.

**14. Subsequent Events**

***Share Issuance Pursuant to Reverse Stock Split***

No fractional shares were issued as a result of the Reverse Stock Split, rather, the fractional shares of Common Stock were rounded up to the nearest whole share. As a result, the Company issued 73,040 of newly issued Common Stock to the Company's existing stockholders in April 2024.

***Convertible Note***

On April 24, 2024, the Company received written notice from counsel for Streeterville that an alleged event of default occurred with respect to the Note (as defined in Note 7), issued by the Company in favor of Streeterville, pursuant to that certain Securities Purchase Agreement dated November 4, 2022 by and between the Company and Streeterville (the "*SPA*"). The Notice alleges that, among other things, (i) the announcement of the plan to partially spin-off of the Company's wholly-owned subsidiary, Hope Therapeutics, Inc. (the "*Spin-Off*"), constituted a "Fundamental Transaction" (as defined in the Note") for which the Company failed to obtain Streeterville's prior written consent before undertaking such transaction; and (ii) the Company failed to pay the Minimum Payment, as defined under Section 4 of the Note, by April 8, 2024, following a Redemption Notice issued on April 3, 2024 by Streeterville to the Company, each of which resulted in the failure to cure a Trigger Event and subsequent Event of Default of the Note, and as a result, Streeterville was therefore accelerating all of the outstanding amounts due thereunder.

The Company has also learned that Streeterville filed a complaint (the "*Complaint*") naming the Company as a defendant in the Third Judicial District Court of Salt Lake County, Utah. The Complaint is seeking, among other things: (i) declaratory

relief for an order enjoining the Company from undertaking any Fundamental Transaction, including the Spin-Off, or otherwise issuing Common Stock or other equity securities (such as the shares of the Company pursuant to the announced Spin-Off); and (ii) repayment of the Note and other unspecified amounts of damages, costs and fees, but no less than $6.5 million, or the amounts currently outstanding under the Note.

***Increase in At-The-Market Offering Agreement***

On April 15, 2024, the Company increased the maximum aggregate offering amount of the shares of Common Stock issuable under that certain At the Market Offering Agreement, dated August 14, 2023 (the "*Offering Agreement*"), with H.C. Wainwright & Co., and filed a prospectus supplement (the "*Current Prospectus Supplement*") under the Offering Agreement for an aggregate of $4.9 million. Prior to the date hereof, the Company sold shares of Common Stock having an aggregate sales price of $1.0 million under the Offering Agreement. Subsequent to March 31, 2024, the Company sold additional shares of Common Stock at an aggregate sales price of $1.3 million.

***April 2024 Offering***

On April 18, 2024, we entered into an underwriting agreement (the "*April Underwriting Agreement*") with EF Hutton LLC (the "*Representative*"), as the representative of the several underwriters named therein (the "*April Underwriters*"), relating to an underwritten public offering of 607,000 shares of the Company's Common Stock (the "*April Shares*"). The public offering price for each share of Common Stock was $3.30 and the April Underwriters purchased the shares of Common Stock pursuant to the April Underwriting Agreement at a price for each share of Common Stock of $3.00. Pursuant to the April Underwriting Agreement, the Company also granted the Representative a 45-day option to purchase up to an additional 91,050 shares (the "*April Option Shares*") of Common Stock on the same terms as the April Shares (as defined above) sold in the April Over-Allotment Option. On April 19, 2024, the April Offering closed (the "*April Closing Date*").

Aggregate gross proceeds from the April Offering were approximately $2.0 million, before deducting underwriting discounts and commissions and estimated expenses payable by the Company of approximately $0.3 million. The Company intends to use the net proceeds from the April Offering for working capital and general corporate purposes, including its plan to initiate a national treatment protocol and safety database. The Company may also use the proceeds from this offering to repay the Convertible Promissory Note initially issued to Streeterville Capital, LLC in November 2022.

Pursuant to the April Underwriting Agreement, the Company agreed to issue to the Representative in connection with the April Offering, a warrant to purchase up to a number of shares of Common Stock representing 5.0% of the April Shares and any April Option Shares sold, at an initial exercise price of $3.63 per share, subject to certain adjustments (the "*April Underwriter's Warrant*"). On April 19, 2024, the Company issued to the Representative the April Underwriter's Warrant to purchase up to 30,350 shares of Common Stock (the "*April Underwriter Warrant Shares*"). In the event that the April Over-Allotment Option is exercised in full, the Company will issue to the Representative an additional April Underwriter's Warrant to purchase up to 4,553 shares of Common Stock. The April Underwriter's Warrant is exercisable six months following the date of the April Underwriting Agreement and terminates on the five-year anniversary of the date of the April Underwriting Agreement.

The April Offering was made pursuant to the Company's registration statement on Form S-3 (File No. 333-265492), as amended, previously filed with the SEC on June 9, 2022, and declared effective on June 21, 2022, a base prospectus dated June 21, 2022, and a prospectus supplement dated April 18, 2024.

## 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' 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. All references to "Note," followed by a number reference from 1 to 14 herein, refer to the applicable corresponding numbered footnotes to these condensed consolidated* financial statements.

**Overview**

NRx Pharmaceuticals, Inc. (Nasdaq: NRXP) ("*NRX*" or the "*Company*") is a clinical-stage bio-pharmaceutical company which develops and will distribute, through its wholly-owned operating subsidiaries, NeuroRx, Inc., ("*NeuroRx*") and HOPE Therapeutics, Inc. ("*HOPE*"), novel therapeutics for the treatment of central nervous system disorders including suicidal depression, chronic pain, and post-traumatic stress disorder ("*PTSD*"). NeuroRx is organized as a traditional Research and Development ("*R&D*") company, whereas HOPE is organized as a Specialty Pharmaceutical (SpecPharma) company intended to distribute ketamine and other therapeutic options to clinics that serve patients with suicidal depression and PTSD.

During the first quarter of 2024 and in the subsequent period, the Company has achieved the following:

- We executed a non-binding term sheet from an institutional investor for up to $7.5 million in debt capital to replace current toxic debt, clearing the path to a proposed spin-off of HOPE, our wholly-owned subsidiary, to our shareholders, with provision for funding up to an additional $22.5 million to fund pipeline opportunities;
- We recorded positive data from a Phase 2b/3 trial of NRX-101 in Treatment Resistant Bipolar Depression; trial demonstrated depression efficacy comparable to standard of care and significant reduction of akathisia (P=0.025). Akathisia is a potentially lethal side effect of all serotonin-targeted antidepressants and is associated with suicide. Study additionally demonstrated a 30% advantage in sustained remission from suicidality that was not statistically-significant at this sample size;
- The above findings of reduced suicidality mirror the results of the Company's prior STABIL-B trial in acutely suicidal patients and also mirror the results of an independent published trial;
- The Company plans to file a New Drug Application ("*NDA*") for Accelerated Approval under Breakthrough and Priority Review of NRX-101 in treatment of bipolar depression in people at risk of akathisia, based on the Phase 2b/3 and STABIL-B data;
- We developed patentable pH neutral formulation for ketamine that will be suitable for both intravenous and subcutaneous administration. Ketamine efficacy data are in hand from 4 clinical trials. Three manufacturing lots are now completed (required for NDA) and Company to initiate NDA by July;
- We have engaged our auditors and are progressing towards completion of the audit for HOPE, which focuses on care delivery (not drug development) and continue to anticipate a separate Nasdaq listing and share dividend to current investors as previously announced. We have partnered with representatives of ketamine clinic operators to construct a care platform that will include ketamine, operational support, and digital therapeutic extensions. In advance of Food and Drug Administration ("*FDA*") approval, HOPE is supplying ketamine under 503b pharmacy licensure to meet the national ketamine shortage declared by FDA;
- Data expected shortly in 200-person US Department of Defense ("*DOD*")-funded trial of D-cycloserine ("*DCS*"), the key component of NRX-101, to treat chronic pain, conducted by Northwestern University. As of May 1, 2024 the Statistical analysis plan and data unlock have been approved by Northwestern IRB;
- NRX-101 in the treatment of Complicated Urinary Tract Infection ("*cUTI*") granted Qualified Infectious Disease Product ("*QIDP*"), Fast Track, and Priority Review designations. Company has now demonstrated that NRX-101 does not damage the microbiome of the gut, in contrast to all other advanced antibiotics and is less likely to cause *C. Difficile* infection (a potentially lethal side effect of antibiotic treatment). NRx is reviewing partnership options: and
- Executed Memorandum of Understanding with Fondation FundaMental for rights to develop potential disease modifying drug for schizophrenia. If successful, this would represent the first drug to reverse the underlying disease mechanism of schizophrenia, rather than simply treating symptoms.

**Development of NRX-101 for Suicidal Treatment-Resistant Suicidal Bipolar Depression**

On May 5, 2024, the Company announced final data from the recently completed phase 2b/3 trial of NRX-101 in suicidal bipolar depression, with a significantly improved safety profile as demonstrated by a statistically significant reduction in

akathisia, an adverse event considered by many experts to be a precursor to suicide. Given the vital need for safer medications in this at-risk population, we plan to submit an NDA to the US FDA for treatment of bipolar depression patients at risk of akathisia, based on these data as well as additional data from our STABIL-B trial.[1]

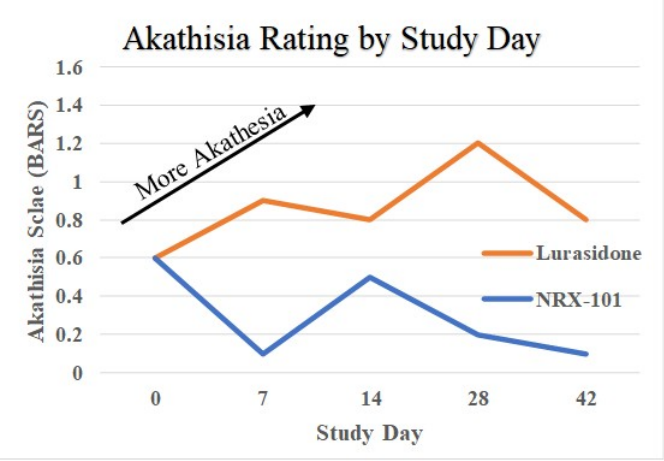
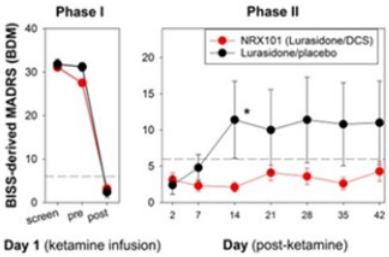



*Figure 1: Akathisia rating by study day: A consistent effect is seen commencing at the first post-randomization visit and continued throughout the study (Mixed Model Repeated Measures Regression Effect size =.37; P=0.025).*

Trial participants had identical mean scores on the BARS at baseline with subsequent decrease in the NRX-101 treated group versus an increase in the lurasidone-treated group, yielding a 76% relative mean difference between the groups. The difference was apparent at the first post-randomization visit and continued throughout the trial. (Fig 1) Over the 42 days of observation, an effect size of .37 was identified with a statistically significant P value of 0.025 on the Mixed Model for Repeated Measures methodology agreed to with FDA in the 2018 Special Protocol Agreement. Akathisia as ascertained by a 1 point increase in the BARS was seen in 11% of participants randomized to lurasidone (comparable to previous reports in the literature) and seen in only 2% of those treated with NRX-101, an akathisia level that was previously reported for the placebo arm of the lurasidone registration trial.

Akathisia was a prespecified key safety endpoint of the Company's clinical trial. Hence this finding is not a "post-hoc" observation. As previously noted, this clinical trial of 91 participants with suicidal bipolar depression who were not pre-treated with ketamine demonstrated that NRX-101 and lurasidone were comparable in their antidepressant effect. A 33% but statistically non-significant sustained decrease in suicidality was also seen favoring NRX-101. As noted above, improved antidepressant efficacy is not required to seek drug accelerated drug approval based on a statistically-significant safety benefit.

The results released on May 24 are consistent with and amplify the results of the Company's previously published STABIL-B trial (Fig 2 below). In both trials a meaningful reduction in Akathisia was seen, which was statistically significant in the current trial (P<.025) and near significant (P=0.11) in the STABIL-B with similar effect sizes The STABIL-B additionally demonstrated a statistically-significant reduction in suicidality on the Columbia Suicide Severity Rating Scale (C-SSRS).




| | Efficacy Measures: Repeated Measures Mixed Model LS Mean Differences | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Through Day 28 | | | | Through Day 42 | | | |
| | LOCF No | | LOCF yes | | LOCF No | | LOCF yes | |
| MADRS Depression | LS Mean Δ | p-value | LS Mean Δ | p-value | LS Mean Δ | p-value | LS Mean Δ | p-value |
| Score | -4.0 | 0.09 | -7.7 | 0.03 | -3.7 | 0.04 | -7.7 | 0.04 |
| Suicidality Rating | LS Mean Δ | p-value | LS Mean Δ | p-value | LS Mean Δ | p-value | LS Mean Δ | p-value |
| Scale C-SSRS | -0.5 | NS | -1.3 | 0.04 | -0.6 | NS | -1.5 | 0.02 |
| Clinical Global | LS Mean Δ | p-value | LS Mean Δ | p-value | LS Mean Δ | p-value | LS Mean Δ | p-value |
| Impression CGI-SS | -0.4 | NS | -2.9 | 0.05 | -0.6 | NS | -2.9 | 0.02 |

[1] Nierenberg A, Lavin P, Javitt DC, et. al. NRX-101 vs lurasidone for the maintenance of initial stabilization after ketamine in patients with severe bipolar depression with acute suicidal ideation and behavior; a randomized prospective phase 2 trial. Int J Bipolar Dis 2023;11:28-38, doi.org/10.1186/s40345-023-00308-5.

Reduced suicidality associated with the administration of D-cycloserine has additionally been demonstrated by Chen and Coworkers.

Figure 2: Results from published STABIL-B Trial

During 2024, the Company began working in unison with Alvogen Pharma US, Inc., Alvogen, Inc. and Lotus Pharmaceutical Co. Ltd. (collectively, "*Alvogen*") to plan the final development and commercialization of NRX-101. These partners recently advanced $5 million of the first milestone to the Company. Final licensing of the product, expected in Q2 2024 is anticipated to yield a total of $9 million in milestone payments together with assumption of future development costs by our partners. The partnership provides for potential milestone payments of $329 million and a royalty reaching 15% on Net Sales.

NRX-101 for Treatment of Chronic Pain: In 2023, the Company licensed US Patent 8,653,120 for the use of DCS in chronic pain and filed a now-accepted Investigational New Drug application with the FDA to initiate commercial drug development of NRX-101 in chronic pain. Data lock has now been achieved in a 200-person randomized prospective trial funded by the US DOD (NCT 03535688) in which patients with chronic pain were randomly assigned to DCS 400mg/day vs. placebo. Should these results support efficacy of DCS in the treatment of chronic low back pain, they are expected to provide a Breakthrough Therapy path towards treatment of chronic pain with DCS and DCS-containing medicines.

**Incorporation of HOPE Therapeutics and progress towards an NDA for HTX-100 (IV ketamine) in the treatment of suicidal depression**

In Q1 2024, the Company incorporated HOPE Therapeutics as a wholly-owned subsidiary and has engaged its auditors and are progressing towards the completion of an audit of its financial statements necessary for the intended spin-off of HOPE to the Company's shareholders. Intravenous ketamine has now become a standard of care for acute treatment of suicidal depression, in the absence of an FDA-labeled product. Intranasal Esketamine is approved by the FDA (SPRAVATO®), but has not demonstrated a benefit on suicidality and is not approved for use in patients with bipolar depression. Attempts to use intranasal racemic ketamine for suicidal depression have failed.

The Company has formed data-sharing partnerships to license clinical trial data from a French Government-funded trial and two National Institute of Health (NIH)-funded trials all of which demonstrate efficacy of racemic Intravenous ketamine against depression and two of which demonstrate statistically significant benefit vs suicidality. The Company's role is to reformat these data into the required presentation required for review by the FDA.

In contrast to nasal ketamine, Intravenous racemic ketamine demonstrates dramatic and immediate reduction of suicidality in patients with both Major Depressive Disorder and Bipolar Depression. Grunebaum and colleagues demonstrated a rapid and statistically significant reduction in Suicidal Ideation at day 1 (p=0.0003) and in depression (P=0.0234), as measured by the Profile of Mood States among patients randomized to IV Ketamine compared to those randomized to midazolam. This trial was published in the American Journal of Psychiatry . Abbar and colleagues similarly published 84% remission from suicidality on the C-SSRS in patients treated with ketamine, vs. 28% in those treated with placebo (P<.0001). This trial was published in the British Medical Journal. Data are expected to be transmitted to FDA by July 2024.

In November 2023, the Company initiated manufacture of ketamine together with Nephron Pharmaceuticals, Inc. to develop a single patient presentation of ketamine. Nine months of real-time stability is expected in June 2024, the minimum stability time required for a New Drug Application.

A long-term challenge with ketamine is that the current formulation (KETALAR®) is highly acidic. While it is suitable for intravenous use, it cannot be administered subcutaneously. In March 2024 the Company demonstrated the formulation of a pH neutral patentable form of IV ketamine that it anticipates will have widespread applicability both in treatment of depression and chronic pain.

**Treatment of Urinary Tract Infection ("*UTI*") and Urosepsis:**

Although treatment of UTI is quite different from use of NRX-101 to treat Central Nervous System disorders, D-cycloserine was originally developed as an antibiotic because of its role in disrupting the cell wall of certain pathogens. During Q3 2023, NRx tested NRX-101 and its components against resistant pathogens that appear on the Congressionally mandated QIDP list and proved in vitro effectiveness against antibiotic-resistant *E. coli, Pseudomonas, and Acinetobacter.* Accordingly, NRx was granted QIDP designation, Fast Track Designation, and Priority Review by the US FDA in January 2024.

In recent years, increased antibiotic resistance to common pathogens that cause urinary tract infections and urosepsis (i.e., sepsis originating in the urinary tract) has resulted in a marked increase in cUTI, hospitalization, and death from urosepsis. The US Center for Disease Control and Prevention reports that more than 1.7 million Americans contract sepsis each year, of whom at least 350,000 die during their hospitalization or are discharged to hospice (CDC Sepsis Ref.). There are approximately 3 million patients per year who contract cUTI in the U.S. annually (Lodise, et. al.). Additionally, should NRX-101 succeed in clinical trials, the Company will consider developing a follow-on product that is anticipated to achieve another 20 years of patent exclusivity.

A key challenge in the treatment of cUTI is the tendency of advanced antibiotics to cause C. Difficile infection, which is fatal in 10% of those who contract it over the age of 65 and results in prolonged hospitalization in many more. The Company recently announced data demonstrating that NRX-101 does not compromise the intestinal microbiome, unlike common antibiotics including Clindamycin and Ciprofloxacin. Should these findings be documented in human patients, NRX-101 would represent the only treatment for cUTI that does not cause *C. Difficile* infection.

**Recent Events**

*Reverse Stock Split*

On March 28, 2024, the Company filed with the Secretary of State of the State of Delaware a Certificate of Amendment to the Company's Second Amended and Restated Certificate of Incorporation (the "*Charter Amendment*") to effect a 1-for-10 reverse stock split (the "*Reverse Stock Split*") of the Company's Common Stock, par value $0.001 per share (the "*Common Stock*"), which Reverse Stock Split was effective April 1, 2024. All references in this Report to number of common shares, price per share and weighted average number of shares outstanding have been adjusted to reflect the Reverse Split on a retroactive basis.

*April 2024 Offering*

On April 18, 2024, we entered into the April Underwriting Agreement with EF Hutton LLC, as the representative of the April Underwriters, relating to the April Offering of 607,000 shares of the Company's Common Stock. The public offering price for each share of Common Stock was $3.30 and the April Underwriters purchased the shares of Common Stock pursuant to the April Underwriting Agreement at a price for each share of Common Stock of $3.00. Pursuant to the April Underwriting Agreement, the Company also granted the Representative a 45-day option to purchase up to an additional 91,050 shares of Common Stock on the same terms as the Shares sold in the April Offering. On April 19, 2024, the Offering closed.

Aggregate gross proceeds from the April Offering were approximately $2.0 million, before deducting underwriting discounts and commissions and estimated expenses payable by the Company of approximately $0.3 million. The Company intends to use the net proceeds from the April Offering for working capital and general corporate purposes, including its plan to initiate a national treatment protocol and safety database. The Company may also use the proceeds from this offering to repay the Convertible Promissory Note initially issued to Streeterville Capital, LLC in November 2022.

Pursuant to the April Underwriting Agreement, the Company agreed to issue to the Representative in connection with the April Offering, a warrant to purchase up to a number of shares of Common Stock representing 5.0% of the Shares and any April Option Shares sold, at an initial exercise price of $3.63 per share, subject to certain adjustments. On April 19, 2024, the Company issued to the Representative the April Underwriter's Warrant to purchase up to 30,350 shares of Common Stock. In the event that the April Over-Allotment Option is exercised in full, the Company will issue to the Representative

an additional April Underwriter's Warrant to purchase up to 4,553 shares of Common Stock. The April Underwriter's Warrant is exercisable six months following the date of the April Underwriting Agreement and terminates on the five-year anniversary of the date of the April Underwriting Agreement.

The April Offering was made pursuant to the Company's registration statement on Form S-3 (File No. 333-265492), as amended, previously filed with the Securities and Exchange Commission (the "*SEC*") on June 9, 2022, and declared effective on June 21, 2022, a base prospectus dated June 21, 2022, and a prospectus supplement dated April 18, 2024.

*Increase in At-The-Market Offering Agreement*

On April 15, 2024, the Company increased the maximum aggregate offering amount of the shares of Common Stock issuable under that certain At the Market Offering Agreement, dated August 14, 2023 (the "*Offering Agreement*"), with H.C. Wainwright & Co., and filed a prospectus supplement (the "*Current Prospectus Supplement*") under the Offering Agreement for an aggregate of $4.9 million. Prior to the date hereof, the Company sold shares of Common Stock having an aggregate sales price of $1.0 million under the Offering Agreement. Subsequent to March 31, 2024, the Company sold additional shares of Common Stock at an aggregate sales price of $1.3 million.

*February 2024 Offerings*

On February 27, 2024, we entered into the February Underwriting Agreement with the Representative (as defined above), as the representative of the February Underwriters (as defined above), relating to the February 2024 Public Offering (as defined above) of 500,000 shares of the Common Stock. The public offering price for each share of Common Stock was $3.00, and the February Underwriters purchased the shares of Common Stock pursuant to the February Underwriting Agreement at a price for each share of Common Stock of $2.76. On February 28, 2024, the Offering closed. Aggregate gross proceeds from the Febraury 2024 Public Offering were approximately $1.7 million (including Overallotment Exercise proceeds), before deducting underwriting discounts and commissions and estimated expenses payable by the Company.

Pursuant to the February Underwriting Agreement and the engagement letter, dated as of February 22, 2024, by and between the Company and the Representative, the Company agreed to issue to the Representative in connection with the February 2024 Public Offering, a warrant to purchase up to a number of shares of Common Stock representing 5.0% of the shares of Common Stock and any February Option Shares (as defined below) sold, at an initial exercise price of $3.30 per share, subject to certain adjustments (the "*February Underwriter's Warrant*"). On February 28, 2024, the Company issued to the Representative the February Underwriter's Warrant to purchase up to 25,000 shares of Common Stock. The February Underwriter's Warrant is exercisable six months following the date of the February Underwriting Agreement and terminates on the five-year anniversary of the date of the February Underwriting Agreement.

Pursuant to the February Underwriting Agreement, the Company also granted the Representative a 45-day Over-Allotment Option to purchase up to an additional 75,000 February Option Shares. On March 5, 2024, the February Underwriters exercised the February Over-Allotment Option to purchase an additional 75,000 February Option Shares. In connection with the February Overallotment Exercise, we issued an additional February Underwriter's Warrant to purchase up to 3,750 shares of Common Stock. The February Overallotment Exercise closed on March 6, 2024.

On February 29, 2024, we entered into a securities purchase agreement with an investor providing for the issuance and sale of 270,000 shares of Common Stock and warrants to purchase up to 270,000 shares of Common Stock at a price of $3.80 per share of Common Stock and accompanying warrant, which represents a 26.7% premium to the offering price in the February 2024 Public Offering. The Common Stock and the February Warrants were offered pursuant to a private placement under Section 4(a)(2) of the Securities Act of 1933, as amended (the "*Securities Act*"). The February Warrants will have an exercise price of $3.80 per share, are initially exercisable beginning six months following the date of issuance, and will expire 5 years from the date of issuance. The aggregate net cash proceeds to the Company from the February 2024 Private Placement (as defined above) were approximately $1.0 million.

The Company announced on February 5, 2024 that the incorporation of HOPE Therapeutics™ (HOPE), a biotechnology company dedicated to bring NRX-100 (IV Ketamine), will be re-designated HTX-100, a potentially lifesaving treatment option for patients with Suicidal Depression. The Company will initially be owned by NRx and its current shareholders, who will receive their shares in the form of a dividend with an accompanying royalty coupon tied to future sales of HTX-100, subject to Board approval. HOPE is dedicated to providing an FDA-approved presentation of IV Ketamine, manufactured to current federal standards, in a diversion- and abuse-deterrent presentation. An NDA is planned for the first

half of 2024, based on more than 1,000 patients treated in well-controlled trials of ketamine in Suicidal Depression together with HOPE's expertise in sterile products formulation.

**Financial Results**

Since inception, the Company has incurred significant operating losses. For the three months ended March 31, 2024 and 2023, the Company's net loss was $6.5 million and $11.0 million, respectively. As of March 31, 2024, the Company had an accumulated deficit of $259.7 million, a stockholders' deficit of $15.1 million and a working capital deficit of $15.5 million.

**Going Concern**

The Company's ongoing clinical activities continue to generate losses and net cash outflows from operations. The Company plans to pursue additional equity or debt financing or refinancing opportunities in 2024 to fund ongoing clinical activities, to meet obligations under its current debt arrangements and for the general corporate purposes of the Company. Such arrangements may take the form of loans, equity offerings, strategic agreements, licensing agreements, joint ventures or other agreements. The sale of equity could result in additional dilution to the Company's existing shareholders. The Company cannot make any assurances that additional financing will be available to it and, if available, on acceptable terms, or that it will be able to refinance its existing debt obligations which could negatively impact the Company's business and operations and could also lead to a reduction in the Company's operations. We will continue to carefully monitor the impact of our continuing operations on our working capital needs and debt repayment obligations. As such, the Company has concluded that substantial doubt exists about the Company's ability to continue as a going concern for a period of at least twelve months from the date of issuance of these consolidated financial statements. The Company may raise substantial additional funds, and if it does so, it may do so through one or more of the following: issuance of additional debt or equity and/or the completion of a licensing or other commercial transaction for one of the Company's product candidates.

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

**Nasdaq Listing Compliance**

On October 17, 2023, we received formal notice from the Nasdaq Listing Qualifications Staff (the "*Staff*") which indicated that, based upon our non-compliance with the minimum bid price requirement for continued listing on The Nasdaq Global Market, as set forth in Nasdaq Listing Rule 5550(a)(2) (the "*Rule*"), our securities were subject to delisting unless we timely requested a hearing before the Nasdaq Hearings Panel (the "*Panel*"). Such hearing was timely requested and subsequently held on January 4, 2024. On January 16, 2024, the Panel granted our request for an exception to the Nasdaq Listing Rules until April 16, 2024, to demonstrate compliance with the Minimum Bid Price Requirement, subject to our filing all necessary documentation required to transfer our listing from the Nasdaq Global Market to the Nasdaq Capital Market on or before January 19, 2024, and our demonstrating compliance with the Minimum Bid Price Requirement on or before April 16, 2024. On February 1, 2024, the Nasdaq Stock Market informed us that it had approved our application to transfer our listing to the Nasdaq Capital Market. Our securities were transferred from the Nasdaq Global Market to the Nasdaq Capital Market at the opening of business on January 19, 2024. We received authorization from our stockholders for the Reverse Stock Split, which became effective April 2, 2024. Following the Reverse Stock Split, on April 17, 2024 we received a written notice from Nasdaq informing the Company that it has regained compliance for continued listing on the Nasdaq Capital Market, which non-compliance resulted from our failure to comply with Nasdaq Listing Rule 5810(c)(3)(C).

**Components of Results of Operations**

*Research and development expense*

The Company's research and development expense consists primarily of costs associated with the Company's 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 expense*

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

**Results of operations for the three months ended March 31, 2024 and 2023**

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

| | Three months ended March 31, | | Change |
|---|---|---|---|
| | 2024 | 2023 | Dollars |
| | (Unaudited) | | |
| Operating expense: | | | |
| Research and development | $ 1,748 | $ 3,650 | $ (1,902) |
| General and administrative | 4,250 | 5,785 | (1,535) |
| Total operating expense | 5,998 | 9,435 | (3,437) |
| Loss from operations | $ (5,998) | $ (9,435) | $ 3,437 |
| | | | |
| Other (income) expense: | | | |
| Interest income | $ (27) | $ (156) | $ 129 |
| Interest expense | 230 | — | 230 |
| Change in fair value of convertible note payable | 318 | 1,772 | (1,454) |
| Change in fair value of warrant liabilities | 9 | (12) | 21 |
| Total other (income) expense | 530 | 1,604 | (1,074) |
| Loss before tax | (6,528) | (11,039) | 4,511 |
| Net loss | $ (6,528) | $ (11,039) | $ 4,511 |

***Operating expense***

*Research and development expense*

For the three months ended March 31, 2024, the Company recorded $1.7 million of research and development expenses compared to approximately $3.7 million for the three months ended March 31, 2023. The decrease of $2.0 million is related primarily to a decrease of $1.6 million in clinical trials and development expenses, $0.2 million in other regulatory and process development costs, $0.1 million related to stock-based compensation, and less than $0.1 million related to fees paid to regulatory and process development consultants, less than $0.1 million in shipping, freight, and delivery. The research and development expenses for the three months ended March 31, 2024 and 2023, respectively, include less than $0.1 million and $0.1 million, respectively, of non-cash stock-based compensation.

*General and administrative expense*

For the three months ended March 31, 2024, the Company recorded $4.3 million of general and administrative expense compared to approximately $5.8 million for the three months ended March 31, 2023. The decrease of $1.5 million is related primarily to a decrease of $1.2 million in insurance expense, $0.4 million in stock-based compensation expense, $0.4 million in employee expense, and less than $0.1 million in patent expense, partially offset by an increase of $0.4 million in consultant fees, $0.2 million in other general and administrative expense, less than $0.1 million in legal expense. The general and administrative expense for the three months ended March 31, 2024 and 2023, respectively, include $0.2 million and $0.6 million, respectively, of non-cash stock-based compensation.

***Other (income) expense***

*Interest income*

For the three months ended March 31, 2024, the Company recorded less than $0.1 million of interest income compared to $0.2 million of interest income for the three months ended March 31, 2023. The decrease of $0.2 million is due to interest earned in the Company's money market account.

*Interest expense*

For the three months ended March 31, 2024, the Company recorded $0.2 million of interest expense, compared to no interest expense for the three months ended March 31, 2023. The increase of $0.2 million is due to premiums for cash payments on the convertible note.

*Change in fair value of convertible note payable*

For three months ended March 31, 2024, the Company recorded a loss of approximately $0.3 million related to the change in fair value of the convertible note payable which is accounted for under the fair value option. For the three months ended March 31, 2023, the Company recorded a loss of approximately $1.8 million related to the change in fair value of the convertible note payable which is accounted for under the fair value option.

*Change in fair value of warrant liabilities*

For the three months ended March 31, 2024, the Company recorded a loss of less than $0.1 million related to the change in fair value of the warrant liabilities compared to a gain of less than $0.1 million for the three months ended March 31, 2023. The decrease of less than $0.1 million related to the change in the fair value of certain Substitute Warrants (as defined in Note 9) and the Placement Warrants (as defined in Note 9) assumed pursuant to the Merger Agreement (as defined in Note 1).

**Liquidity and Capital Resources**

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

***April 2024 Offering***

On April 18, 2024, we entered into the April Underwriting Agreement with the Representative, as the representative of the April Underwriters, relating to the April Offering of the Shares, which April Offering closed on the April Closing Date. The public offering price for each share of Common Stock was $3.30 and the April Underwriters purchased the shares of Common Stock pursuant to the April Underwriting Agreement at a price for each share of Common Stock of $3.003. Pursuant to the April Underwriting Agreement, the Company also granted the Representative the April Over-Allotment Option during the April Over-Allotment Period.

Aggregate gross proceeds from the April Offering were approximately $2.0 million, before deducting underwriting discounts and commissions and estimated expenses payable by the Company. The Company intends to use the net proceeds from the April Offering for working capital and general corporate purposes, including its plan to initiate a national treatment protocol and safety database. The Company may also use the proceeds from this offering to repay the Convertible Promissory Note initially issued to Streeterville Capital, LLC in November 2022.

Pursuant to the April Underwriting Agreement, the Company agreed to issue to the Representative the April Underwriter's Warrant in connection with the April Offering. On the April Closing Date, the Company issued to the Representative the April Underwriter's Warrant to purchase April Underwriter Warrant Shares. In the event that the April Over-Allotment Option is exercised in full, the Company will issue to the Representative an additional April Underwriter's Warrant to purchase up to 4,553 shares of Common Stock. The April Underwriter's Warrant is exercisable six months following the date of the April Underwriting Agreement and terminates on the five-year anniversary of the date of the April Underwriting Agreement.

***February 2024 Offerings***

On February 27, 2024, the Company entered into an February Underwriting Agreement (as defined above) with EF Hutton LLC, as the Representative (as defined above) of the February Underwriters (as defined above), relating to the February 2024 Public Offering. The public offering price for each share of Common Stock was $3.00 and the February Underwriters purchased the shares of Common Stock pursuant to the February Underwriting Agreement at a price for each share of Common Stock of $2.76. Pursuant to the February Underwriting Agreement, the Company also granted the Representative the February Over-Allotment Option. Aggregate gross proceeds from the February Underwriting Agreement were approximately $1.7 million (including February Overallotment Exercise proceeds), before deducting underwriting discounts and commissions and estimated expenses payable by the Company. The Company intends to use the net proceeds from the February 2024 Public Offering for working capital and general corporate purposes. The Company also used the proceeds from February 2024 Public Offering to repay the Convertible Promissory Note initially issued to Streeterville Capital, LLC in November 2022.

On March 5, 2024, the Underwriters in the February 2024 Public Offering exercised their February Over-Allotment Option to purchase an additional 75,000 February Option Shares. In connection with the February Overallotment Exercise, we issued an additional February Underwriter's Warrant to purchase up to 3,750 shares of Common Stock. The February Overallotment Exercise closed on March 6, 2024.

On February 29, 2024, the Company completed the February 2024 Private Placement. Pursuant to the securities purchase agreement, the Company issued and sold 270,000 shares of Common Stock and warrants to purchase up to 270,000 shares of Common Stock at a price of $3.80 per share of Common Stock and accompanying warrant, which represents a 26.7% premium to the offering price in February 2024 Public Offering. The common stock and the February Warrants were offered pursuant to a private placement under Section 4(a)(2) of the Securities Act. The February Warrants will have an exercise price of $3.80 per share, are initially exercisable beginning six months following the date of issuance, and will expire 5 years from the date of issuance. The aggregate net cash proceeds to the Company from the February 2024 Private Placement were approximately $1.0 million.

***Streeterville Note***

On November 4, 2022, we issued an 9% redeemable promissory note (as amended, the "*Note*") to Streeterville Capital, LLC, a Utah limited liability company ("*Streeterville*"), for an aggregate principal amount of $11.0 million. The Note matures 18 months from the date of issuance subject to certain acceleration provisions. The Note carries an original issue discount of $1.0 million which was deducted from the principal balance of the Note. The net proceeds from the issuance of the Note was $10.0 million 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 $1.0 million of the outstanding balance of the Note per month starting six months after the issuance date. Payments may be made by the Company at their option in: (i) in cash with a 10% premium for the amount redeemed, (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 the lender will be entitled to redeem over the following ten (10) trading days an amount of indebtedness then outstanding under the Note equal to twice the monthly redemption amount of $1.0 million solely by payment by stock, if permitted under the agreement, subject to the Maximum Percentage (as defined in the Note) and other ownership limitations. On March 30, 2023, the Company entered into an Amendment to the Note (the "*First Amendment*"), pursuant to which the Maximum Percentage was set at 9.99% of the number of shares of Common Stock outstanding on a given date.

On July 7, 2023, the Company entered into Amendment #2 to the Note with Streeterville (the "*Second Amendment*"). Pursuant to the Second Amendment, the Company agreed to amend the redemption provisions of the Note to provide that the Company would pay to Streeterville an amount in cash equal to $1,800,000 on or before July 10, 2023, which amount was paid on July 10, 2023. In addition, the Company agreed that, beginning on or before July 31, 2023, and on or before the last day of each month until December 31, 2023 (the "*Minimum Payment Period*"), we would pay Streeterville an amount equal to $400,000 in cash (a "*Minimum Payment*"), less any amount satisfied by the delivery of Redemption Conversion Shares (as defined below). Notwithstanding the foregoing, Streeterville may also submit a request for redemption of up to an aggregate of $1,000,000 per month (the "*Maximum Monthly Redemption Amount*" and, together with the Minimum Payment Amount, the "*Redemption Amounts*") in accordance with the terms of the Note. However, the portion of each Minimum Payment that is not satisfied by the delivery of Redemption Conversion Shares is the maximum amount of cash we will be required to pay in accordance with the Second Amendment during the Minimum Payment Period. The redemption of the Maximum Monthly Redemption Amount in excess of the Minimum Amount may be satisfied by the delivery of additional Redemption Conversion Shares.

On February 9, 2024, the Company entered into Amendment #3 to Convertible Promissory Note (the "*Third Amendment*"), with Streeterville. Pursuant to the Third Amendment, the Company and Streeterville agreed to further amend the terms of that certain Convertible Promissory Note dated November 4, 2022, in the original principal amount of $11,020,000, as amended by the amendments to the Convertible Promissory Note dated March 30, 2023 and July 7, 2023 (as amended, the "*Note*"). In accordance with the Third Amendment, the Company and Streeterville agreed to amend the redemption provisions of the Note. In particular, the Company agreed to pay Streeterville an amount in cash equal to $1,100,000 on February 12, 2024. In addition, beginning on or before February 29, 2024, on or before the last day of each month until July 31, 2024 (the "*Minimum Payment Period*"), the Company shall pay Streeterville an amount equal to $400,000 in cash (a "*Minimum Payment*"), less any amount satisfied by the delivery of Redemption Conversion Shares (as defined in the Note).

Notwithstanding the foregoing, after April 30, 2024, and for the remainder of the Minimum Payment Period, Streeterville may redeem any Redemption Amount (as defined in the Note), including an amount in excess of the Minimum Payment, subject to the Maximum Monthly Redemption Amount (as defined in the Note). During the Minimum Payment Period, the Company is permitted to pay the Redemption Amounts in the form of shares of Common Stock of the Company (the "*Redemption Conversion Shares*") calculated on the basis of the Redemption Conversion Price (as defined in the Note) without regard to the existence of any Equity Conditions Failure to the extent Streeterville submits redemption notices during such month pursuant to the terms of the Note, and only for the Redemption Amounts covered by such notices. Moreover, the Redemption Premium (as defined in the Note) will continue to apply to the Redemption Amounts. To the extent there is an outstanding balance under the Note after the expiration of the Minimum Payment Period, the Company will be required to pay such outstanding balance in full in cash by August 31, 2024.

Since December 31, 2023 and through March 25, 2024, the Company has made aggregate principal, premium and interest payments of $2.9 million to Streeterville, consisting of cash payments of $2.5 million and the issuance of 1,436,472 shares of Common Stock with a value of $0.4 million.

During the Minimum Payment Period, the Company is permitted to pay the Redemption Amounts in the form of shares of Common Stock of the Company (the "*Redemption Conversion Shares*") calculated on the basis of the Redemption Conversion Price (as defined in the Note) without regard to the existence of an Equity Conditions Failure. Moreover, the Redemption Premium (as defined in the Note) will continue to apply to the Redemption Amounts.

The Company has also learned that Streeterville filed a complaint (the "*Complaint*") naming the Company as a defendant in the Third Judicial District Court of Salt Lake County, Utah. The Complaint is seeking, among other things: (i) declaratory relief for an order enjoining the Company from undertaking any Fundamental Transaction, including the Spin-Off, or otherwise issuing Common Stock or other equity securities (such as the shares of Hope Therapeutics pursuant to the announced Spin-Off); and (ii) repayment of the Note and other unspecified amounts of damages, costs and fees, but no less than $6.5 million, or the amounts currently outstanding under the Note.

***Alvogen License Agreement***

On June 2, 2023, the Company entered into a License Agreement (the "*License Agreement*") with Alvogen Pharma US, Inc., Alvogen, Inc. and Lotus Pharmaceutical Co. Ltd. (collectively, "*Alvogen*"). Under the License Agreement, NRx granted Alvogen an exclusive, worldwide, transferable and sublicensable license under certain intellectual property (including

patents, know-how and trademarks) owned or controlled by NRx to develop (with certain limitations), manufacture, and commercialize NRX-101, for the treatment of bipolar depression with suicidality. The term of the license is, on a country-by-country basis, 20 years from the first commercial sale of NRX-101 in such country, extendable by Alvogen for a two-year period upon its request made prior to the expiration of such 20-year period. During the term of the License Agreement, the parties have agreed (on behalf of themselves and their affiliates) not to research, develop, seek or obtain any regulatory approval for the manufacturing, marketing, sale, or other commercialization of any product containing a fixed dose combination of D-cycloserine and lurasidone in the treatment of bipolar depression with suicidality, nor to authorize or assist (including by investing in or otherwise providing funding to) any third party to do so.

During the term of the License Agreement, NRx is permitted to develop additional products containing D-cycloserine in combination with one or more other active antidepressant or antipsychotic ingredients for use outside of the field of treatment of bipolar depression with suicidality, such as in post-traumatic stress disorder (PTSD) or chronic pain in depression, in which case, if NRx wishes to license rights to develop or commercialize such additional products or indications, Alvogen has a right of first negotiation to obtain such a license.

Under the terms of the License Agreement, we have the right to an aggregate of up to $330 million in cash milestone payments, including an initial $9 million First Milestone Payment, upon the achievement of certain milestones. A second milestone payment of $5 million is due upon Alvogen's receipt of a copy of the FDA's notice of NDA Approval for Product with the label indication for the treatment of bipolar depression with sub-acute or acute suicidality. Additional cash milestone payments will become payable to us upon the achievement of net sales targets measured over the trailing four quarters. Alvogen has also agreed to pay the Company royalties based on the net sales of NRX-101.

*Alvogen advance of milestone*

In February, 2024, the License Agreement was amended and we became eligible to receive $5 million as an advance of the First Milestone completion within the License Agreement. As compensation for advancing the milestone, Alvogen and Lotus received warrants to purchase up to 419,598 shares of the Company's Common Stock, at a strike price of $4.00 with a three year term. The second portion of the first milestone will be $4 million and, as before, be triggered by a positive response to the Company's planned end of phase 2 meeting with FDA. A second milestone payment of $5 million (the "*Approval Payment*") is due upon Alvogen's receipt of a copy of the FDA's notice of NDA Approval for Product with the label indication for the treatment of bipolar depression with sub-acute or acute suicidality. NRx then remains eligible to receive up to $315 million in future development and sales milestones, as well as royalty payments escalating to mid-teen percentages on Net Sales, subject to achievement of certain sales volumes.

***Cash Flows***

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

| | March 31, 2024 | December 31, 2023 |
|---|---|---|
| **Balance Sheet Data:** | | |
| Cash | $ 1,319 | $ 4,595 |
| Total assets | 3,788 | 7,315 |
| Convertible note payable | 6,779 | 9,161 |
| Total liabilities | 18,857 | 19,048 |
| Total stockholders' deficit | (15,069) | (11,733) |

| | March 31, | |
|---|---|---|
| | 2024 | 2023 |
| | (Unaudited) | |
| **Statement of Cash Flow Data:** | | |
| Net cash used in operating activities | (3,671) | (6,089) |
| Net cash used in investing activities | — | (4) |
| Net cash provided by financing activities | 395 | 2,545 |
| Net (decrease) increase in cash | $ (3,276) | $ (3,548) |

*Operating activities*

During the three months ended March 31, 2024, operating activities used approximately $3.7 million of cash, primarily resulting from a net loss of $6.5 million partially offset by net non-cash losses of $0.6 million, including $0.3 million in change in fair value of convertible promissory note, and $0.2 million of stock-based compensation, and changes in operating assets and liabilities of $2.3 million.

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

*Investing activities*

During the three months ended March 31, 2024 there was $0 of investing activities. During the three months ended March 31, 2023 investing activities used less than $0.1 million of cash related to the purchase of equipment.

*Financing activities*

During the three months ended March 31, 2024, financing activities provided $0.4 million of cash resulting from $1.0 million in proceeds from issuance of Common Stock and warrants issued in a private placement, and $1.5 million in proceeds from issuance of Common Stock and warrants offset by $2.2 million in repayments of the convertible note.

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

**Contractual Obligations and Commitments**

See Note 7, Debt, and Note 8, Commitments and Contingencies, of the notes to the Company's condensed consolidated financial statements as of and for the three months ended March 31, 2024 included elsewhere in this report for further discussion of the Company's commitments and contingencies.

*Milestone Payments*

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

**Off-Balance Sheet Arrangements**

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

**Critical Accounting Policies and Significant Judgments and Estimates**

The Company's management's discussion and analysis of its financial condition and results of operations is based on its financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States of America ("*GAAP*"). The preparation of these financial statements requires the Company 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, the Company 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. The Company bases its estimates and assumptions on current facts, historical experiences, and various other factors that the Company 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.

The Company 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 the Company applies those principles. While its significant accounting policies are more fully described in Note 3 to its financial statements, the Company believes the following are the critical accounting policies used in the preparation of its financial statements that require significant estimates and judgments.

*Stock-based compensation*

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

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

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

*Warrant liabilities*

We account for warrants as either equity-classified or liability-classified instruments based on an assessment of the warrant's specific terms and applicable authoritative guidance in the Financial Accounting Standards Board ("*FASB*") Accounting Standards Codification ("*ASC*") Topic 480, Distinguishing Liabilities from Equity ("*ASC 480*") and FASB ASC Topic 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 Private Placement Warrants was estimated using a Black Scholes valuation approach and the fair value of the Substitute Warrants was estimated using a modified Black Scholes valuation approach which applies a probability factor based on the earnout cash milestone and earnout shares milestone probabilities of achievement at each reporting period.

*Convertible note payable*

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

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

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

**Item 3. Quantitative and Qualitative Disclosures About Market Risk**

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

**Item 4. Controls and Procedures**

**(a) Evaluation of Disclosure Controls and Procedures**

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

In designing and evaluating the disclosure controls and procedures, we recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and we were required to apply our judgment in evaluating the cost-benefit relationship of possible controls and procedures. We have carried out an evaluation as of March 31, 2024 under the supervision, and with the participation, of our management, including our Chief Executive Officer (who serves as our principal executive officer) and our Chief Financial Officer (who serves as our principal financial officer), of the effectiveness of the design and operation of our disclosure controls and procedures.

Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of March 31, 2024 in providing reasonable assurance of achieving the desired control objectives.

**(b) Changes in Internal Control Over Financial Reporting**

There were no changes in the Company's internal controls over financial reporting that occurred during the three months ended March 31, 2024 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting. The Company continues to review its disclosure controls and procedures, including its internal control over financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that the Company's systems evolve with its business.

## PART II – OTHER INFORMATION

### Item 1. Legal Proceedings.

See Note 8, Commitments and Contingencies, of the notes to the Company's unaudited condensed consolidated financial statements as of and for the three months ended March 31, 2024 included elsewhere in this report for further discussion of certain legal proceedings in which we are involved.

### 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, 2023 filed with the SEC on March 29, 2024 (the "*Annual Report on Form 10-K*"). There have been no material changes from the risk factors previously disclosed. You should carefully consider the risk factors set forth in the Annual Report on Form 10-K and other information set forth elsewhere in this Quarterly Report on Form 10-Q. You should be aware that these risk factors and other information may not describe every risk that we face. Additional risks and uncertainties not currently known to us, or that we currently deem to be immaterial, or may not be able to assess, also may materially adversely affect our business, financial condition and/or operating results.

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

None.

### Item 3. Defaults Upon Senior Securities

No defaults upon senior securities occurred during the three months ended March 31, 2024, that were not previously reported.

### Item 4. Mine Safety Disclosures

Not applicable.

### Item 5. Other Information

None of our directors or executive officers adopted or terminated a Rule 10b5-1 trading arrangement or a non-Rule 10b5-1 trading arrangement during the quarter ended March 31, 2024, as such terms are defined under Item 408(a) of Regulation S-K. Additionally, we did not adopt or terminate a Rule 10b5–1 trading arrangement during the quarter ended March 31, 2024.

### Item 6. Exhibits

| Exhibit Number | Description | Incorporation by Reference |
|---|---|---|
| 1.1 | Underwriting Agreement, dated April 18, 2024, by and between NRx Pharmaceuticals, Inc. and EF Hutton LLC, | Exhibit 1.1 to the Current Report on Form 8-K, filed on April 19, 2024 |

| Exhibit Number | Description | Incorporation by Reference |
|---|---|---|
| 4.1 | Form of Underwriter's Warrant between NRx Pharmaceuticals, Inc. issued April 19, 2024. | Exhibit 4.1 to the Current Report on Form 8-K, filed on April 19, 2024 |
| 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. | |
| 99.1 | Notice by Streeterville Capital, LLC. | Exhibit 99.1 to the Current Report on Form 8-K, filed on April 30, 2024 |
| 101* | Interactive data files pursuant to Rule 405 of Regulation S-T formatted in Inline XBRL: (i) Condensed Consolidated Balance Sheets as of March 31, 2024 (Unaudited) and December 31, 2023; (ii) Unaudited Condensed Consolidated Statements of Operations for the three months ended March 31, 2024 and 2023 ; (iii) Unaudited Condensed Consolidated Statements of Changes in Stockholders' Equity (Deficit) for the three months ended March 31, 2024 and 2023; (iv) Unaudited Condensed Consolidated Statements of Cash Flows for the three months ended March 31, 2024 and 2023; and (v) Notes to Unaudited Financial Statements. | |
| 104 | Cover Page Interactive Data File (formatted in iXBRL and contained in Exhibit 101) | |

\+ Filed herewith.

† This certification is being furnished solely to accompany this Quarterly Report pursuant to 18 U.S.C. Section 1350, and is not being filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not to be incorporated by reference into any filing of the registrant, whether made before or after the date hereof, regardless of any general incorporation language in such filing.

* In accordance with Rule 406T of Regulation S-T, the XBRL-related information in Exhibit 101 to this Quarterly Report on Form 10-Q is deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act, is deemed not filed for purposes of section 18 of the Exchange Act, and otherwise is not subject to liability under these sections.

**SIGNATURES**

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

NRX PHARMACEUTICALS, INC.

Date: May 14, 2024

By: /s/ Richard Narido
Richard Narido
*Chief Financial Officer (Principal Financial Officer)*

**Exhibit 31.1**

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

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

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

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

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

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

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

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

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

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

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

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Registrant's ability to record, process, summarize and report financial information; and
   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal control over financial reporting.

Date: May 14, 2024

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

**Exhibit 31.2**

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

I, Richard Narido, Chief Financial Officer of NRx Pharmaceuticals, Inc., certify that:

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

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Quarterly Report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the Registrant as of, and for, the periods presented in this Quarterly Report;
4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Registrant and have:
   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Registrant is made known to us by others within those entities, particularly during the period in which this Quarterly Report is being prepared;

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

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

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

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

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

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

Date: May 14, 2024

/s/ Richard Narido
Richard Narido
Chief Financial Officer (Principal Financial Officer)

**Exhibit 32.1**

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

In connection with the filing of the Quarterly Report on Form 10-Q for the three months ended March 31, 2024 (the "Report") by NRx Pharmaceuticals, Inc. (the "Registrant"), I, Stephen H. Willard, as Chief Executive Officer of the Registrant hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

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

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

Date: May 14, 2024

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

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

**Exhibit 32.2**

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

In connection with the filing of the Quarterly Report on Form 10-Q for the three months ended March 31, 2024 (the "Report") by NRx Pharmaceuticals, Inc. (the "Registrant"), I, Richard Narido, as Chief Financial Officer of the Registrant hereby certify pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

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

Date: May 14, 2024

/s/ Richard Narido
Richard Narido
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.