As filed with the Securities and Exchange Commission on July 6, 2021

Registration No. 333-257438

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

AMENDMENT NO. 1
TO
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

NRX Pharmaceuticals, Inc.
(Exact name of registrant as specified in its charter)

Delaware	2836	82-2844431
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

1201 Orange Street, Suite 600
Wilmington, Delaware 19801
(484) 254-6134
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Alessandra Daigneault
General Counsel and Secretary
1201 North Market Street, Suite 111
Wilmington, Delaware 19801
(484) 254-6134
(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

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1285 Avenue of the Americas
New York, NY 10019-6064
(212) 373-3000

Approximate date of commencement of proposed sale to the public:

As soon as practicable after the effective date of this Registration Statement.

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

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, anon-accelerated filer, a smaller reporting company or an emerging growth company. See the 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	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☒

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

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to Be Registered	Amount to be Registered(1)(2)	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price(3)	Amount of Registration Fee(3)
Common Stock, par value $0.001 per share (for resale)	8,757,258	$13.55 (3)	$118,660,846	$12,946
Common Stock, par value $0.001 per share (for issuance)	3,586,250	$11.50 (4)	$41,241,875	$4,499
Total	12,343,508	$25.05	$159,902,721	$17,445

(1) Consists of (i) 8,757,258 shares of Common Stock registered for sale by the selling securityholders named in this registration statement and (ii) 3,586,250 shares of Common Stock issuable upon exercise of warrants to purchase shares of Common Stock.

(2) Pursuant to Rule 416 under the Securities Act of 1933, as amended, this registration statement also covers any additional number of shares of common stock issuable upon stock splits, stock dividends or other distribution, recapitalization or similar events with respect to the shares of Common Stock being registered pursuant to this registration statement.

(3) Previously paid.

(4) Based on the $11.50 exercise price of a warrant in accordance with Rule 457(g) under the Securities Act.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

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

Subject to Completion Preliminary Prospectus dated July 6, 2021.

PROSPECTUS

NRX Pharmaceuticals, Inc.

8,757,258 Shares of Common Stock
3,586,250 Shares of Common Stock Issuable Upon Exercise of Warrants

This prospectus relates to the resale, from time to time, of up to 8,757,258 shares of our common stock, par value $0.001 per share ("Common Stock"), by the selling securityholders (including their pledgees, donees, transferees or other successors-in-interest) identified in this prospectus (the "Selling Securityholders"). This prospectus also relates to the issuance by us of up to 3,586,250 shares of Common Stock upon the exercise of outstanding warrants.

On May 24, 2021, we consummated the business combination, or the Business Combination, contemplated by the Agreement and Plan of Merger (as amended the "Merger Agreement"), dated December 13, 2020, by and among our company (formerly known as Big Rock Partners Acquisition Corp. ("BRPA")), NeuroRx, Inc. ("NeuroRx") and Big Rock Merger Corp., pursuant to which Big Rock Merger Corp. was merged with and into NeuroRx, with NeuroRx surviving the merger ("Merger"). As a result of the Merger, and upon consummation of the Merger and the other transactions contemplated by the Merger Agreement, NeuroRx became a wholly-owned subsidiary of BRPA. Upon the closing of the Business Combination, we changed our name to NRX Pharmaceuticals, Inc. ("NRx Pharmaceuticals"), with stockholders of NeuroRx becoming stockholders of NRx Pharmaceuticals. See "Prospectus Summary - Background."

We are registering 1,000,000 shares of our Common Stock held by certain of the Selling Securityholders pursuant to the terms of subscription agreements (the "Subscription Agreements"), entered into with certain of the Selling Securityholders, or the PIPE Securityholders. Pursuant to the Subscription Agreements, the PIPE Securityholders purchased shares of our Common Stock in a private placement in connection with the Business Combination, or the PIPE.

We are also registering 4,000,000 shares of Common Stock held by Jonathan Javitt and Daniel Javitt (the "Javitt Stockholders"), consisting of 2,000,000 shares of Common Stock beneficially held by Jonathan Javitt and 2,000,000 shares of Common Stock beneficially held by Daniel Javitt, pursuant to the terms of a Registration Rights Agreement, dated as of May 24, 2021, which we entered into with the Javitt Stockholders in connection with the Business Combination.

We are also registering an aggregate of 1,424,000 shares of Common Stock held by certain stockholders of ours who have registration rights pursuant to the Registration Rights Agreement, dated November 20, 2017 (as amended, the "BRPA Registration Rights Agreement").

We are also registering 499,630 shares of Common Stock issued upon the cashless exercise of certain unit purchase options dated as of November 20, 2017 (the "UPOs"). We are obligated to register such shares pursuant to the terms of the UPOs.

We are also registering 1,833,628 shares of Common Stock underlying the warrant shares held by GEM Yield Bahamas Limited ("GEM"), pursuant to the terms of the Common Stock Purchase Warrant, dated as of March 28, 2021 (the "GEM Warrant").

We are also registering the issuance of shares of Common Stock underlying the warrants pursuant to the terms of a Warrant Agreement, dated November 20, 2017, as amended, between us and Continental Stock Transfer and Trust Company, or the Warrant Agreement.

We will not receive any proceeds from the sale of the shares by the Selling Securityholders. We will receive the proceeds from any exercise of the warrants for cash.

We will bear all costs, expenses and fees in connection with the registration of the shares of Common Stock. The Selling Securityholders will bear all commissions and discounts, if any, attributable to their sales of the shares of Common Stock.

Our Common Stock is listed on the Nasdaq Global Market ("Nasdaq") under the symbol "NRXP" and our warrants are listed on Nasdaq under the symbol "NRXPW". On July 2, 2021, the closing sale price of our Common Stock as reported on Nasdaq was $11.94, and the closing sale price of our warrants as reported on Nasdaq was $3.85.

We are an "emerging growth company" under applicable Securities and Exchange Commission rules and, as such, have elected to comply with certain reduced public company disclosure requirements for this prospectus and future filings. See "Prospectus Summary - Implications of Being an Emerging Growth Company."

Our business and investment in our Common Stock involve significant risks. These risks are described in the section titled "Risk Factors" beginning on page 5 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is July 6, 2021.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the U.S. Securities and Exchange Commission, or the SEC, using a "shelf" registration process. By using a shelf registration statement, the Selling Securityholders may sell up to 8,757,258 shares of Common Stock from time to time in one or more offerings as described in this prospectus. We will not receive any proceeds from the sale of Common Stock by the Selling Securityholders. This prospectus also relates to the issuance by us of up to 3,586,250 shares of Common Stock upon any exercise of warrants. We will receive the proceeds from any exercise of warrants for cash.

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

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

We own or have rights to trademarks, trade names and service marks, including ZYESAMI andRLF-100, that we use in connection with the operation of our business. In addition, our name, logos and website name and address are our trademarks or service marks. Solely for convenience, in some cases, the trademarks, trade names and service marks referred to in this prospectus are listed without the applicable ®, ™ and SM symbols, but we will assert, to the fullest extent under applicable law, our rights to these trademarks, trade names and service marks. Other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners.

As used in this prospectus, unless otherwise indicated or the context otherwise requires, references to "we," "us," "our," the "company" and "NRx Pharmaceuticals" refer to the consolidated operations of NRx Pharmaceuticals, Inc. and its subsidiaries. References to "Big Rock Partners Acquisition Corp." or "BRPA" refer to the company prior to the consummation of the Business Combination and references to "NeuroRx" refer to NeuroRx, Inc. prior to the consummation of the Business Combination.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This document and the information incorporated by reference herein include "forward-looking statements" within the meaning of the "safe harbor" provisions of the U.S. Private Securities Litigation Reform Act of 1995, which may include, but are not limited to, statements regarding our financial outlook, product development, business prospects, and market and industry trends and conditions, as well as the company's strategies, plans, objectives, and goals. These forward-looking statements are based on current beliefs, expectations, estimates, forecasts, and projections of, as well as assumptions made by, and information currently available to, the company's management. Words such as "expect," "anticipate," "should," "believe," "hope," "target," "project," "goals," "estimate," "potential," "predict," "may," "will," "might," "could," "would," "seek," "plan," "intend," "shall," and variations of these terms or the negative of these terms and similar expressions are intended to identify these forward-looking statements. These forward-looking statements are, by their nature, subject to significant risks and uncertainties, many of which involve factors or circumstances that are beyond the company's control. These risks and uncertainties include, but are not limited to, our relatively limited operating history; our ability to expand, retain and motivate our employees and manage our growth; risks associated with general industry conditions and competition; general economic factors, including interest rate and currency exchange rate fluctuations; the impact of the global outbreak of the novel coronavirus disease (COVID-19); the impact of pharmaceutical industry regulation and health care legislation in the United States and internationally; global trends toward health care cost containment; technological advances, new products and patents attained by competitors; challenges inherent in new product development, including obtaining regulatory approval; the company's ability to accurately predict future market conditions; manufacturing difficulties or delays; changes in laws, rules or regulations relating to any aspect of the company's business operations, or general economic, market and business conditions; financial instability of international economies and sovereign risk; dependence on the effectiveness of the company's patents and other protections for innovative products; and the exposure to litigation, including patent litigation, and/or regulatory actions. Furthermore, there can be no guarantees with respect to pipeline products that the products will receive the necessary regulatory approvals or that they will prove to be commercially successful. If underlying assumptions prove inaccurate or risks or uncertainties materialize, actual results may differ materially from those set forth in the forward-looking statements. The Company assumes no obligation and does not intend to update or otherwise revise any forward-looking statement, whether as a result of new information, future events or otherwise, except as required by applicable law. As a result of these and other risks, uncertainties and assumptions, forward-looking events and circumstances discussed herein might not occur in the way that the company's management expects, if at all. Accordingly, you should not place reliance on any forward-looking statement, and all forward-looking statements are herein qualified by reference to the cautionary statements set forth above.

PROSPECTUS SUMMARY

This summary highlights, and is qualified in its entirety by, the more detailed information and financial statements included elsewhere in this prospectus. This summary does not contain all of the information that may be important to you in making your investment decision. You should read this entire prospectus carefully, especially the "Risk Factors" section beginning on page 5 and our consolidated financial statements and the related notes appearing at the end of this prospectus, before deciding to invest in our Common Stock.

Overview

NRx Pharmaceuticals is a clinical-stage small molecule pharmaceutical company which develops novel therapeutics for the treatment of central nervous system disorders and life-threatening pulmonary diseases through its wholly-owned operating subsidiary, NeuroRx, Inc., a Delaware corporation ("NeuroRx"). On September 21, 2020, we announced a commercial partnership with Relief Therapeutics Holding AG for global commercialization of RLF-100 (aviptadil acetate) (now reformulated as ZYESAMI™), an FDA Fast Track-designated, investigational, pre-commercial drug for COVID-19 related respiratory failure (the "NRx COVID-19 Drug"). This product candidate has not yet been submitted for approval and has not yet been approved by the U.S. Food and Drug Administration ("FDA"). The partnership affords Relief Therapeutics the right to fund all formulations and clinical development of aviptadil for treatment of respiratory disease, in exchange for a predetermined share of profits. We are also developing NRX-100/101, an FDA Breakthrough Therapy-designated, investigational, pre-commercial drug for treating bipolar depression in patients with acute suicidal ideation and behavior (the "NRx Antidepressant Drug Regimen").

Background

We were incorporated as Big Rock Partners Acquisition Corp. (Nasdaq:BRPA) on September 18, 2017. On May 24, 2021, BRPA closed the Business Combination with NeuroRx, as a result of which NeuroRx became a wholly-owned subsidiary of BRPA, and BRPA changed its name to NRX Pharmaceuticals, Inc. While BRPA was the legal acquirer of NeuroRx in the Business Combination, NeuroRx is deemed to be the accounting acquirer, and the historical financial statements of NeuroRx became the historical financial statements of BRPA (renamed NRX Pharmaceuticals, Inc.) upon the closing of the Business Combination.

At the effective time of the Business Combination, or the Effective Time, each share of NeuroRx preferred stock and common stock issued and outstanding immediately prior to the Effective Time converted into the right to receive 3.16 shares of our Common Stock (or an aggregate of 44,419,279 shares) plus two contingent value rights. The first contingent value right was the right to receive 1.58 additional shares of NRXP stock (or an aggregate of 21,804,164 shares) if, prior to December 31, 2022, the NRx COVID-19 Drug receives Emergency Use Authorization by the FDA and NRx Pharmaceuticals submits and the FDA files for review a new drug application for the NRx COVID-19 Drug (the occurrence of the foregoing, the "Earnout Shares Milestone"). The second contingent value right was the right to receive approximately $5 USD per share of NeuroRx common stock (or an aggregate of $100,000,000) upon the earlier to occur of (a) FDA approval of the NRx COVID-19 Drug and the listing of the NRx COVID-19 Drug in the FDA's "Orange Book" and (b) FDA approval of the NRx Antidepression Drug Regimen and the listing of the NRx Antidepression Drug Regimen in the FDA's "Orange Book", in each case prior to December 31, 2022 (the occurrence of either clauses (a) or (b), the "Earnout Cash Milestone"). If the Earnout Shares Milestone is achieved, the shares of Common Stock will be issued within five business days after the occurrence of the Earnout Shares Milestone. If the Earnout Cash Milestone is achieved, the Merger Agreement does not require the earnout cash to be delivered to the former NeuroRx securityholders within any specified period of time, and the board of directors of NRX Pharmaceuticals will use its good faith judgment to determine the date to pay such cash.

In March 2021, we entered into the Subscription Agreements, pursuant to which the PIPE Securityholders agreed to subscribe for an aggregate of 1,000,000 shares of our Common Stock at a purchase price of $10.00 per share. Immediately prior to the closing of the Business Combination, we issued and sold 1,000,000 shares of our Common Stock to the PIPE Securityholders for aggregate gross proceeds to us of $10.0 million.

The rights of holders of our Common Stock and warrants are governed by our second amended and restated certificate of incorporation (the "Charter"), our second amended and restated bylaws (the "Bylaws"), and the Delaware General Corporation Law (the "DGCL"), and, in the case of the warrants, the Warrant Agreement. See the section entitled "Description of Capital Stock."

Risk Factors

Our business is subject to a number of risks of which you should be aware before making an investment decision. These risks are discussed more fully in the "Risk Factors" section of this prospectus immediately following this prospectus summary. Some of the risks related to our business and industry are summarized below. Such risks include, but are not limited to:

- We are an early stage company with a history of losses and may not achieve or maintain profitability in the future;
- Our limited operating history and rapid growth makes evaluating our current business and future prospects difficult;
- We will need to raise additional capital to operate our business;
- The NRx Antidepressant Drug Regimen is in Phase IIb/III of clinical testing and neither of our product candidates has ever been formulated or manufactured to the standards that will be required for sustained sales;
- Our product candidates are subject to various regulatory approvals and regulators may impose limitations on approvals for the use or marketing of such product candidates;
- We may not be able to obtain or maintain exclusivity for our product candidates;
- We depend on certain intellectual property licensed to us by third parties;
- Because the market price of shares of Common Stock will fluctuate, our stockholders cannot be sure of the value they will receive; and
- We do not intend to pay dividends on the Common Stock for the foreseeable future.

Corporate Information

We were incorporated under the laws of the state of Delaware on September 18, 2017 under the name Big Rock Partners Acquisition Corp. Upon the closing of the Business Combination, we changed our name to NRx Pharmaceuticals, Inc. Our principal executive offices are located at 1201 Orange Street, Suite 600, Wilmington, Delaware 19801 and our telephone number is (484) 254-6134. Our website address is *www.nrxpharma.com*. The information contained in, or accessible through, our website does not constitute a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Implications of Being an Emerging Growth Company

As a company with less than $1.07 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, as amended, or JOBS Act. An "emerging growth company" may take advantage of reduced reporting requirements that are otherwise applicable to public companies. These provisions include, but are not limited to:

- the option to present only two years of audited financial statements and only two years of related "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this prospectus;
- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended;
- not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements (i.e., an auditor discussion and analysis);

- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding a nonbinding advisory vote of stockholders on executive compensation, stockholder approval of any golden parachute payments not previously approved and having to disclose the ratio of the compensation of our chief executive officer to the median compensation of our employees.

We may take advantage of these provisions until the last day of our fiscal year following the fifth anniversary of the completion of the initial public offering of our securities. However, if (i) our annual gross revenue exceeds $1.07 billion, (ii) we issue more than $1.0 billion of non-convertible debt in any three-year period or (iii) we become a "large accelerated filer" (as defined in Rule12b-2 under the Exchange Act) prior to the end of such five-year period, we will cease to be an emerging growth company. We will be deemed to be a "large accelerated filer" at such time that we (a) have an aggregate worldwide market value of common equity securities held by non-affiliates of $700.0 million or more as of the last business day of our most recently completed second fiscal quarter, (b) have been required to file annual and quarterly reports under the Exchange Act, for a period of at least 12 months and (c) have filed at least one annual report pursuant to the Exchange Act.

We have elected to take advantage of certain of the reduced disclosure obligations in the registration statement of which this prospectus is a part and may elect to take advantage of other reduced reporting requirements in future filings. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. We have elected to use the extended transition period for complying with new or revised accounting standards. As a result of this election, our financial statements may not be comparable to companies that comply with public company effective dates.

The Offering

Common Stock offered by Selling Securityholders	8,757,258 shares
Common Stock offered by us	3,586,250 shares issuable upon exercise of warrants to purchase Common Stock
Exercise per share pursuant to the warrants	$11.50
Number of shares of Common Stock outstanding, assuming the cash exercise of all warrants (1)	51,500,781
Use of proceeds	We will not receive any proceeds from the sale of shares by the Selling Securityholders. We will receive the proceeds from any exercise of the warrants for cash, which we intend to use for general corporate, funding of clinical trial programs and working capital purposes.
Risk factors	You should carefully read the "Risk Factors" beginning on page 6 and the other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our Common Stock.
Nasdaq symbol for our Common Stock	"NRXP"
Nasdaq symbol for our warrants	"NRXPW"

(1) The number of shares of our Common Stock to be outstanding upon exercise of the warrants is based on 47,914,531 shares of our Common Stock outstanding as of June 9, 2021.

RISK FACTORS

You should carefully consider the risks and uncertainties described below and the other information in this prospectus before making an investment in our Common Stock. Our business, financial condition, results of operations, or prospects could be materially and adversely affected if any of these risks occurs, and as a result, the market price of our Common Stock could decline and you could lose all or part of your investment. This prospectus also contains forward-looking statements that involve risks and uncertainties. See "Cautionary Statement Regarding Forward-Looking Statements." Our actual results could differ materially and adversely from those anticipated in these forward-looking statements as a result of certain factors, including those set forth below.

Risks Related to an Early-Stage Company

We are an early-stage company with a history of losses. We have not been profitable historically and may not achieve or maintain profitability in the future.

We experienced net losses in each year since inception, including net losses of $6.7 million and $51.8 million for the years ended, December 31, 2019 and 2020, respectively, and $25.5 million through March 31, 2021. We believe we will continue to incur operating losses and negative cash flow in the near-term as we continue to invest significantly in our business, in particular across our research and development efforts, clinical trial programs and sales and marketing efforts.

These investments may not result in increased revenue or growth in our business. In addition, as a newly-public company, we will incur significant additional legal, accounting and other expenses that we did not incur as a private company. These increased expenditures may make it harder for us to achieve and maintain future profitability. Until we have a product candidate approved by the FDA, which could take several years, revenue growth will not be possible, and we are unlikely to achieve or maintain profitability. Further, there can be no assurance that the products under development by us will be approved for sales in the US or elsewhere.

We expect a substantial portion of our revenue going forward to be generated from the sale and distribution of our product candidates, but until one of our product candidates is approved for sale, it is difficult for us to predict our future operating results. Even if we succeed in developing and commercializing one or more of our product candidates, we expect to incur substantial net losses and negative cash flows for the foreseeable future due in part to increasing research and development expenses, including clinical trials, and increasing expenses from leasing additional facilities and hiring additional personnel. As a result, we will need to generate significant revenues in order to achieve and maintain profitability. We may not be able to generate these revenues or achieve profitability in the future. Even if we do achieve profitability, we may not be able to sustain or increase profitability.

We may incur significant losses in the future for a number of reasons, and we may encounter unforeseen expenses, difficulties, complications and delays and other unknown events. As a result, our losses may be larger than anticipated, we may incur significant losses for the foreseeable future, and we may not achieve profitability when expected, or at all, and even if we do, we may not be able to maintain or increase profitability. Furthermore, if our future growth and operating performance fail to meet investor or analyst expectations, or if we have future negative cash flow or losses resulting from our investment in acquiring customers or expanding our operations, this could have a material adverse effect on our business, financial condition and results of operations.

Our operating results and financial condition may fluctuate from period to period.

If and when any of product candidates are successfully commercialized, we anticipate that our operating results and financial condition will fluctuate from quarter-to-quarter and year-to-year due to a number of factors, many of which will not be within our control. Both our business and the pharmaceutical industry are changing and evolving rapidly, and our operating results in any given year may not be useful in predicting our future operating results. If our operating results do not meet the guidance that we provide to the marketplace or the expectations of securities analysts or investors, the market price of our Common Stock will likely decline. Fluctuations in our future operating results and financial condition may be due to a number of factors, including:

- our ability to manufacture our products in sufficient quantities with Chemical Manufacturing Controls that meet governmental regulatory standards;
- the degree of acceptance of our products and services in the broader healthcare industry;
- our ability to compete with competitors and new entrants into our markets;
- the products and services that we are able to sell during any period;
- the timing of our sales and distribution of our products to customers;
- the geographic distribution of our sales;
- changes in our pricing policies on those of our competitors, including our response to price competition;
- changes in the amount that we spend to research and develop new products or technologies;
- expenses and/or liabilities resulting from litigation;
- delays between our expenditures to research and develop new or enhanced products or technologies, the necessary regulatory approvals and the generation of revenue from those products or technologies;
- unforeseen liabilities or difficulties in integrating any businesses that we choose to acquire;
- disruptions to our information technology systems or our third-party contract manufacturers;
- general economic and industry conditions that affect customer demand;
- the impact of the COVID-19 pandemic on our customers, suppliers, manufacturers and operations; and
- changes in accounting rules and tax laws.

We have a limited operating history upon which to base an investment decision.

Our limited operating history may hinder your ability to evaluate our prospects due to a lack of historical financial data and our unproven potential to generate profits. You should evaluate the likelihood of financial and operational success in light of the risks, uncertainties, expenses and difficulties associated with an early-stage business, many of which may be beyond our control, including:

- our potential inability to continue to undertake preclinical studies, pharmaceutical development and clinical trials,
- our potential inability to obtain regulatory approvals, and
- our potential inability to manufacture, sell and market our products.

Our operations have been limited to organizing and staffing our company, acquiring, developing and securing our proprietary technology and intellectual property and undertaking preclinical studies and early-stage clinical trials of our principal product candidates. These operations provide a limited basis for you to assess our ability to commercialize our product candidates. Further, the pro forma condensed combined financial information included in this registration statement may not be a good prediction of our future results of operations and financial condition.

We need to raise additional capital to operate our business. If we fail to obtain the capital necessary to fund our operations, we will be unable to continue or complete our product development.

We are a company focused on product development and have not generated any product revenues to date. Until, and if, we receive approval from the FDA and other regulatory authorities for our product candidates, we cannot sell our drugs and will not have product revenues. We had cash and cash equivalents of approximately $15.2 million as of June 9, 2021, and we will need to continue to seek capital from time to time to continue to capitalize the development and commercialization of our product candidates and to acquire and develop other product candidates. Accordingly, we believe that we may need to raise substantial additional capital to fund our continuing operations and the development and commercialization of our product candidates before the end of calendar year 2021. We may raise capital through future share offerings, including the Share Subscription Facility with GEM, the issuance of debt instruments and grant monies. Our actual capital requirements will depend on many factors. For instance, our business or operations may change in a manner that would consume available funds more rapidly than anticipated and substantial additional funding may be required to maintain operations, fund expansion, develop new or enhanced products, acquire complementary products, business or technologies or otherwise respond to competitive pressures and opportunities, such as a change in the regulatory environment or a change in preferred depression treatment or COVID-19 treatment modalities. If we experience unanticipated cash requirements, we may need to seek additional sources of financing, which may not be available on favorable terms, if at all.

However, we may not be able to secure funding when we need it or on favorable terms. If we cannot raise adequate funds to satisfy our capital requirements, we will have to delay, scale-back or eliminate our research and development activities, clinical studies or future operations, we may be unable to complete planned nonclinical studies and clinical trials or obtain approval of our product candidates from the FDA and other regulatory authorities. In addition, we could be forced to discontinue product development, reduce or forego sales and marketing efforts and attractive business opportunities, reduce overhead, or discontinue operations. We may also be required to obtain funds through arrangements with collaborators, which arrangements may require us to relinquish rights to certain technologies or products that we otherwise would not consider relinquishing, including rights to future product candidates or certain major geographic markets. We may further have to license our technology to others. This could result in sharing revenues which we might otherwise retain for ourselves. Any of these actions may harm our business, financial condition and results of operations.

The amount of capital we may need depends on many factors, including the progress, timing and scope of our product development programs; the progress, timing and scope of our nonclinical studies and clinical trials; the time and cost necessary to obtain regulatory approvals; the time and cost necessary to further develop manufacturing processes and arrange for contract manufacturing; our ability to enter into and maintain collaborative, licensing and other commercial relationships; and our partners' commitment of time and resources to the development and commercialization of our products.

We may be unable to access the capital markets and even if we can raise additional funding, we may be required to do so on terms that are dilutive to you.

The capital markets have been unpredictable in the recent past for unprofitable companies such as ours. In addition, it is generally difficult for companies to raise capital under current market conditions. The amount of capital that a company such as ours is able to raise often depends on variables that are beyond our control. While we have the ability under the Share Subscription Facility to require GEM to purchase up to approximately $96.2 million (based on an exchange rate of HKD$7.7592 to USD$1 as of June 9, 2021) of shares of Common Stock at a 10% discount to our market trading price, such prices may not be attractive to us and/or issuances may not be sufficient to satisfy our capital needs. As a result, we cannot assure you that we will be able to secure financing on terms attractive to us, or at all. If we are able to consummate a financing arrangement, the amount raised may not be sufficient to meet our future needs. If adequate funds are not available on acceptable terms, or at all, our business, results of operations, financial condition and our continued viability will be materially adversely affected.

It is not possible to predict the actual number of shares of Common Stock that we will sell under the Share Subscription Facility with GEM, or the gross proceeds resulting from those sales.

Subject to certain limitations in the Share Subscription Facility and compliance with applicable law, we have the discretion to deliver a placement notice to GEM at any time until October 18, 2022, the three year anniversary of the Share Subscription Facility agreement. The number of shares of Common Stock that are sold to GEM will fluctuate based on the market price of the Common Stock during the sales period. There is no minimum or maximum price of our Common Stock that we may sell to GEM. Because the price per share of each share sold will fluctuate during the sales period, it is not possible to predict the number of shares that will be sold or the gross proceeds we will raise in connection with those sales.

We will have broad discretion in using the proceeds of shares sold to GEM under the Share Subscription Facility, and we may not effectively spend the proceeds.

We are not limited in the use of proceeds of shares sold to GEM under the Share Subscription Facility. We may use such proceeds for working capital and general corporate purposes to support our growth, to pay dividends on our outstanding securities, or for acquisitions or other strategic investments. We have not allocated such funds to any particular purpose, and our management will have the discretion to allocate the proceeds as it determines. We may not apply the proceeds effectively.

Risks Related to Our Business and Industry

The NRx Antidepressant Drug Regimen is in Phase IIb/III of clinical testing.

NRX-101 is in Phase IIb/III of clinical testing with Breakthrough Therapy Designation and a Special Protocol Agreement issued by the FDA on April 20, 2018. A Special Protocol Agreement is a mechanism by which the FDA indicates that the proposed clinical trial, if successful, will be adequate to support an application for drug approval. FDA approval requires that a drug candidate complete a Phase III study program, which tests the safety and efficacy of the drug candidate on a large sample of patients. The completion of the Phase III study program is estimated to cost less than $10 million and we anticipate having adequate access to capital to complete this trial. The NRX-101 Phase IIb/III trial (NCT 03396068) remains open and is anticipated to conclude later this year. Because NRX-101 is a Breakthrough Therapy, we anticipate being able to file for New Drug Approval (“NDA”) based upon a single, successful Phase III trial. The FDA has assigned three further nonclinical studies before we can submit an NDA with respect to NRX-101. These studies are expected to take approximately 6 months and cost less than $500,000 to complete. While we cannot predict with any certainty if or when we might submit an NDA for regulatory approval of NRX-101, we aim to submit an NDA to the FDA for the regulatory approval and commercialization of NRX-101 in the United States in the first quarter of 2022. ShouldNRX-101 be approved, we expect it will cost between $50 million and $100 million to commercialize the drug. We do not currently have the funds required for commercialization. However, our management believes that funds for the commercialization of approved new drugs in unmet medical needs will generally be available.

We have filed for Emergency Use Authorization for ZYESAMI which may not be granted by the FDA.

We have completed a 196-person Phase IIb/III clinical trial of intravenous ZYESAMI for the treatment of respiratory failure in patients with Critical COVID-19 (NCT04311697) and filed for Emergency Use Authorization for ZYESAMI on May 31, 2021 based on the results of this trial. Should Emergency Use Authorization be granted, this would provide us with a one year period during which ZYESAMI can be marketed for the treatment of COVID-19 in advance of an NDA. In general, an NDA for anon-Breakthrough Therapy requires two clinical trials that meetpre-specified statistical endpoints. As described below, we have completed one clinical trial that reached statistical significance using the pre-specified statistical regression methodology that includes covariates for baseline disease severity and site of care. Specifically, the trial demonstrated statistically significant improvement in survival and in the likelihood of being alive and free of respiratory failure at 60 days among patients treated in tertiary care hospitals but not among patients treated at regional hospitals. The trial did not demonstrate statistical significance and did not meet its primary pre-specified endpoint without that statistical adjustment to trial data. There is no guarantee that the FDA will grant ZYESAMI Emergency Use Authorization, and failure by the FDA to do so could have a material adverse effect on our business and results of operations.

The National Institutes of Health has launched a second Phase III trial, funded by the National Institute of Allergy and Infectious Diseases (NIAID), which compares ZYESAMI to placebo and also to Veklury (remdesivir), a COVID-19 treatment offered by Gilead Sciences (Nasdaq:GILD) alone and in combination with ZYESAMI. This trial is called ACTIV-3b: Therapeutics for Severely Ill Inpatients With COVID-19 (TESICO) (NCT 04843761) and began enrolling patients in April 2021. Should it achieve its primary endpoint of increased likelihood of Recovery from Respiratory Failure at 90 days compared to placebo, this trial would qualify as a second Phase III trial in support of an NDA for ZYESAMI. We cannot predict with any certainty whether this trial will achieve its primary endpoint or if or when we might submit an NDA for regulatory approval, although we expect to submit an NDA to the FDA for approval of ZYESAMI for the treatment of COVID-19 by year end 2021. Safety and efficacy determinations are within FDA's purview and clinical trial results do not guarantee regulatory approval. Failure to obtain FDA approval of ZYESAMI, or a delay in our submission of an NDA for approval of ZYESAMI, could have a material adverse effect on our business and results of operations.

FDA has not explained how the Congressionally-mandated standard of "may be effective" will be applied to ZYESAMI in FDA's consideration of our application for Emergency Use Authorization.

Emergency Use Authorization is a form of temporary marketing authorization that the FDA may grant to an investigational drug at times when the Secretary of Health and Human Services has declared a Public Health Emergency to exist. This declaration was made by the Secretary of Health and Human Services in March 2020 in relation to the COVID-19 pandemic. In order to grant Emergency Use Authorization, the FDA must determine that an investigational drug "may be effective" in treating the disease that is the subject of the Public Health Emergency. The FDA has not advised us how it will determine whether efficacy has been demonstrated in the context of our Emergency Use Authorization request relating to COVID-19 with Respiratory Failure. An FDA determination that ZYESAMI does not meet the "may be effective" standard could have a material adverse effect on our business and results of operations.

Our product candidates have never been formulated or manufactured to the standards that will be required for sustained sales.

NRX-101 has been formulated under cGMP and long-term (i.e., five year) stability has been achieved for our solid dose formulation of NRX-101. This formulation is deemed ready for transfer to a commercial scale cGMP manufacturing facility.

A long-term stable formulation of aviptadil for intravenous or inhaled use has not been yet been achieved by us or, to our knowledge, by any pharmaceutical manufacturer. Nevertheless, we have been able to reliably supply intravenous aviptadil with 60-day shelf life ("Before Use Date") that meets cGMP standards with manufacturing batch records reviewed by the FDA in our clinical trials.

We have partnered with Nephron Pharmaceuticals (West Columbia, SC) to develop a long-term stable commercial presentation of aviptadil. We believe we have identified the root cause of this failure of stability and have identified several paths that we deem likely to achieve a long-term shelf stable product. However, we may fail to achieve a long-term shelf-stable formulation of ZYESAMI and may be forced to supply material to the marketplace with only short-term (e.g., 60 day) stability, which might require us to accept returns of expired product in order to maintain customer good will. Alternatively, we might be forced to supply ZYESAMI in a form which requires freezing until use which would substantially increase our supply chain costs and make our product less attractive to end-users than products that can be stored at room temperature or under refrigeration.

Funding of clinical development costs and formulation costs of Aviptadil may lead to a dispute with Relief Therapeutics.

When we entered into the Relief Agreement (as defined below) with Relief Therapeutics, the expectation was that clinical success of aviptadil for treatment of COVID-19 Respiratory Failure could be demonstrated in a clinical trial of 144 patients over 28 days. In fact, the clinical trial required 196 patients and the FDA amended its guidance to provide for a 60-day observation period to demonstrate success. The additional costs of the increased patient trial population and increased time frame from 28 days to 60 days has been borne by us as Relief Therapeutics has, to date, not funded these additional costs. In addition, we discovered that the formulation and

stability data provided by Relief Therapeutics in its Investigational Medicinal Products Dossier ("IMPD"), which Relief Therapeutics submitted to European Regulators was non-reproducible. The IMPD data documented 18 months or longer shelf stability for aviptadil acetate in saline, a product that is designated as RLF-100 in the Relief Agreement. We advised Relief Therapeutics in January 2021 that the formulation documented in the IMPD yielded only 60-day stability and began developing a longer stability product, ZYESAMI, aiming for a shelf life of at least one year. Under the Relief Agreement, all costs of formulation and Chemical Manufacturing Controls (CMC) are the obligation of Relief Therapeutics. On April 19, 2021, Relief issued a press release acknowledging that "Relief notes that while there are stability issues with the formulation that Relief brought to the collaboration, all of these problems were understood by all parties at the time of the execution of the Collaboration Agreement and that efforts to resolve those issues were contemplated by the Collaboration Agreement." We became aware of the stability issues in December 2020. The Relief Agreement provides that Relief Therapeutics is to pay all costs of formulation and stability should such costs arise. As of June 9, 2021, Relief Therapeutics has not funded the costs of re-formulation of aviptadil into a shelf stable product, which has required us to deploy capital from alternative investors.

The Relief Agreement similarly affords Relief Therapeutics the right to fund the development of ZYESAMI™ for inhaled use. The Relief Agreement provides that in the event Relief Therapeutics chooses not to fund the inhaled use of ZYESAMI™, we would be free to bring in other investment capital for this purpose. Relief Therapeutics has chosen not to fund the inhaled use of ZYESAMI™ and we have proceeded to develop this drug with other sources of capital. These circumstances may lead to a dispute with Relief Therapeutics regarding what share of profits Relief Therapeutics should be entitled to receive based upon its reduced participation in the project.

If we fail to obtain or maintain necessary FDA clearances for our products, or if such clearances are delayed, we will be unable to commercially distribute and market our products.

Our products are subject to rigorous regulation by the FDA and numerous other federal, state and foreign governmental authorities. The process of seeking regulatory clearance or approval to market a drug product is expensive and time consuming and, notwithstanding the effort and expense incurred, clearance or approval is never guaranteed. If we are not successful in obtaining timely clearance or approval of our products from the FDA, we may never be able to generate significant revenue and may be forced to cease operations. In particular, the FDA permits commercial distribution of a new drug product only after the product has received approval of a New Drug Application ("NDA") filed with the FDA pursuant to 21 C.F.R. § 314, seeking permission to market the product in interstate commerce in the United States. The NDA process is costly, lengthy and uncertain. Any NDA application filed by us will have to be supported by extensive data, including, but not limited to, technical, nonclinical, clinical trial, manufacturing and labelling data, to demonstrate to the FDA's satisfaction the safety and efficacy of the product for its intended use.

Obtaining clearances or approvals from the FDA and from the regulatory agencies in other countries could result in unexpected and significant costs for us and consume management's time and other resources. The FDA and other agencies could ask us to supplement our submissions, collect non-clinical data, conduct additional clinical trials or engage in other time-consuming actions, or they could simply deny our applications. In addition, even if we obtain an NDA approval or pre-market approvals in other countries, the approval could be revoked or other restrictions imposed if post-market data demonstrates safety issues or lack of effectiveness. We cannot predict with certainty how, or when, the FDA will act. If we are unable to obtain the necessary regulatory approvals, our financial condition and cash flow may be adversely affected, and our ability to grow domestically and internationally may be limited. Additionally, even if cleared or approved, our products may not be approved for the specific indications that are most necessary or desirable for successful commercialization or profitability.

Our revenue stream will depend upon third party reimbursement.

Once our product candidates are cleared or approved by the FDA or from the regulatory agencies in other countries, the commercial success of our products in both domestic and international markets will be substantially dependent on whether third-party coverage and reimbursement is available for patients that use our products. However, the availability of insurance coverage and reimbursement for newly approved drugs is uncertain, and therefore, third-party coverage may be particularly difficult to obtain even if our products are approved by the FDA as safe and efficacious. Many patients using existing approved therapies are generally reimbursed all or part of the

product cost by Medicare or other third-party payors. Medicare, Medicaid, health maintenance organizations and other third-party payors are increasingly attempting to contain healthcare costs by limiting both coverage and the level of reimbursement of new drugs, and, as a result, they may not cover or provide adequate payment for these products. Submission of applications for reimbursement approval generally does not occur prior to the filing of an NDA for that product and may not be granted for as long as many months after NDA approval. In order to obtain reimbursement arrangements for these products, we or our commercialization partners may have to agree to a net sales price lower than the net sales price we might charge in other sales channels. The continuing efforts of government and third-party payors to contain or reduce the costs of healthcare may limit our revenue. Initial dependence on the commercial success of our products may make our revenues particularly susceptible to any cost containment or reduction efforts.

We may have conflicts with our partners that could delay or prevent the development or commercialization of our product candidates.

We may have commercial conflicts with our partners, such as the interpretation of contractual obligations, payments for services, development obligations or the ownership of intellectual property developed during our collaboration. If any conflicts arise with any of our partners, such partner may act in a manner that is adverse to our best interests. Any such disagreement could result in one or more of the following, each of which could delay or prevent the development or commercialization of our product candidates, and in turn prevent us from generating revenues: unwillingness on the part of a partner to pay us a share in profits that we believe are due to us under a collaboration; uncertainty regarding ownership of intellectual property rights arising from our collaborative activities, which could prevent us from entering into additional collaborations; unwillingness on the part of a partner to keep us informed regarding the progress of its development and commercialization activities or to permit public disclosure of the results of those activities; initiating of litigation or alternative dispute resolution options by either party to resolve the dispute; or attempts by either party to terminate the agreement.

Our products will face significant competition in the markets for such products, and if they are unable to compete successfully, our business will suffer.

Our products candidates face, and will continue to face, intense competition from large pharmaceutical companies, specialty pharmaceutical and biotechnology companies as well as academic and research institutions. We compete in an industry that is characterized by: (i) rapid technological change, (ii) evolving industry standards, (iii) emerging competition and (iv) new product introductions. Our competitors have existing products and technologies that will compete with our products and technologies and may develop and commercialize additional products and technologies that will compete with our products and technologies. Because several competing companies and institutions have greater financial resources than us, they may be able to: (i) provide broader services and product lines, (ii) make greater investments in research and development, and (iii) carry on larger R&D initiatives. Our competitors also have greater development capabilities than we do and have substantially greater experience in undertaking non-clinical and clinical testing of products, obtaining regulatory approvals, and manufacturing and marketing pharmaceutical products. They also have greater name recognition and better access to customers than us. Our chief competitors in the psychiatry area include companies such as Johnson and Johnson, Pfizer, Eli Lilly, Sage Therapeutics, Axsome, and Relmada, among others. We are not aware of any other investigational COVID-19 therapeutics that address ZYESAMI's unique mechanism of action. Furthermore, in our many interactions with the U.S Department of Health and Human Services, Operation Warp Speed and the National Institutes of Health, no direct competitor has been identified.

We are faced with intense competition and rapid technological change, which may make it more difficult for us to achieve significant market penetration. If we cannot compete successfully for market share against other drug companies, we may not achieve sufficient product revenues and our business will suffer.

The market for our product candidates is characterized by intense competition and rapid technological advances. If our product candidates receive FDA approval, they will compete with a number of existing and future drugs and therapies developed, manufactured and marketed by others. If our competitors' existing products or new products are more effective than or considered superior to our future products, the commercial opportunity for our product candidates will be reduced or eliminated. Existing or future competing products may provide greater therapeutic convenience or clinical or other benefits for a specific indication than our products, or may offer

comparable performance at a lower cost. We face competition from fully integrated pharmaceutical companies and smaller companies that are collaborating with larger pharmaceutical companies, academic institutions, government agencies and other public and private research organizations. If we are successful in penetrating the relevant markets for treatment with our product candidates, other companies may be attracted to the market. Many of our competitors have products already approved or in development. In addition, many of these competitors, either alone or together with their collaborative partners, are larger than we are and have substantially greater financial, technical, research, marketing, sales, distribution and other resources than we do. Our competitors may develop or market products that are more effective or commercially attractive than any that we are developing or marketing. Our competitors may obtain regulatory approvals, and introduce and commercialize products before we do. These developments could have a significant negative effect on our financial condition. Even if we are able to compete successfully, we may not be able to do so in a profitable manner.

Future products may never achieve market acceptance.

Future products that we may develop may never gain market acceptance among physicians, patients and the medical community. The degree of market acceptance of any of our products will depend on a number of factors, including the actual and perceived effectiveness and reliability of our products; the results of any long-term clinical trials relating to use of our products; the availability, relative cost and perceived advantages and disadvantages of alternative technologies; the degree to which treatments using our products are approved for reimbursement by public and private insurers; the strength of our marketing and distribution infrastructure; and the level of education and awareness among physicians and hospitals concerning our products. Failure of any of our products to significantly penetrate current or new markets would negatively impact our business, financial condition and results of operations.

To be commercially successful, physicians must be persuaded that using our products are effective alternatives to existing therapies and treatments.

We believe that doctors and other physicians will not widely adopt our products unless they determine, based on experience, clinical data, and published peer reviewed journal articles, that the use of our products provides an effective alternative to other therapies and treatments. Patient studies or clinical experience may indicate that treatment with our products does not provide patients with sufficient benefits and/or improvement in quality of life. We believe that recommendations and support for the use of our products from influential physicians will be essential for widespread market acceptance. Our products are still in the development stage and it is premature to attempt to gain support from physicians at this time. We can provide no assurance that such support will ever be obtained. If our products do not receive such support from these physicians and from long-term data, physicians may not use or continue to use, and hospitals may not purchase or continue to purchase, our products.

We may incur substantial liabilities and may be required to limit commercialization of our products in response to product liability lawsuits.

The testing and marketing of medical products entail an inherent risk of product liability. We may be held liable if serious adverse reactions from the use of our product candidates occur. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of pharmaceutical products we develop, alone or with corporate collaborators. We currently carry clinical trials liability insurance, but we do not currently carry product liability insurance. While we plan to obtain product liability insurance as we near commercialization, we, or any corporate collaborators, may not be able to obtain insurance at a reasonable cost, if at all. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate if any claim arises.

We do not anticipate obtaining orphan drug protection for the treatment ofCOVID-19.

The Orphan Drug Act provides incentives for the development of drugs intended to treat rare diseases or conditions, which generally are diseases or conditions affecting less than 200,000 individuals annually in the United States, or affecting more than 200,000 in the United States and for which there is no reasonable expectation that the cost of developing and making the drug available in the United States will be recovered from United States sales. Orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical study costs, tax advantages, and user-fee waivers. Further, if a product that has orphan drug designation subsequently receives FDA approval for the indication for which it has such designation, the product is entitled to orphan exclusivity, i.e., for seven years, the FDA may not approve any other applications to market the same drug for the same indication, except in very limited circumstances, including if a competitive product is shown to be clinically superior to the product that was granted orphan exclusivity. COVID-19 is not considered a rare disease and the FDA has advised us that any potential benefits afforded to aviptadil based on an orphan drug designation would not apply to its use for the treatment of COVID-19.

We may not be able to obtain Hatch-Waxman Act marketing exclusivity or equivalent regulatory data exclusivity protection in other jurisdictions for our products.

We intend to rely, in part, on Hatch-Waxman exclusivity for the commercialization of our products in the United States. The Hatch-Waxman Act provides marketing exclusivity to the first applicant to gain approval of an NDA under specific provisions of the Food, Drug and Cosmetic Act for a product using an active ingredient that the FDA has not previously approved (five years) or for a new dosage form, route or indication (three years). This market exclusivity will not prevent the FDA from approving a competitor's NDA if the competitor's NDA is based on studies it has performed and not on our studies. However, there can be no assurance that we will obtain Hatch-Waxman exclusivity for our products or that such exclusivity, if obtained, will protect us from direct competition.

Similarly, in the European Union, new products authorized for marketing (i.e., reference products) qualify for eight years of data exclusivity and an additional two years of market exclusivity upon marketing authorization, which, if obtained, would prevent generic applicants from relying on our preclinical and clinical trial data. However, there can be no assurance that European authorities will grant data exclusivity for our products. Even if European data exclusivity is granted for our products, that may not protect us from direct competition. A competitor with a generic version of our products may be able to obtain approval of their product during our product's period of data exclusivity by submitting a marketing authorization application (MAA) with a less than full package of nonclinical and clinical data.

We intend to undertake international operations, which will subject us to risks inherent with operations outside of the United States.

Although we do not have any foreign operations at this time, we intend to seek to obtain market clearances in foreign markets that we deem to generate significant opportunities. However, even with the cooperation of a commercialization partner, conducting drug development in foreign countries involves inherent risks, including, but not limited to: difficulties in staffing, funding and managing foreign operations; unexpected changes in regulatory requirements; export restrictions; tariffs and other trade barriers; difficulties in protecting, acquiring, enforcing and litigating intellectual property rights; fluctuations in currency exchange rates; and potentially adverse tax consequences.

We will need to obtain approvals from the appropriate regulatory, pricing and reimbursement authorities to market any of our proposed products internationally, and we may be unable to obtain foreign regulatory approvals. Pursuing foreign regulatory approvals will be time-consuming and expensive. The regulations can vary among countries and foreign regulatory authorities may require different or additional clinical trials than the trials we conducted to obtain FDA approval for our product candidates. In addition, adverse clinical trial results in such countries, such as death or injury due to side effects, could jeopardize not only regulatory approval, but if approval is granted, may also lead to marketing restrictions. Our product candidates may also face foreign regulatory requirements applicable to controlled substances.

If we were to experience any of the difficulties listed above, or any other difficulties, any international development activities and our overall financial condition may suffer and cause us to reduce or discontinue our international development and registration efforts.

International commercialization of our product candidates requires successful collaborations.

We plan to commercialize some of our products internationally through collaborative relationships with foreign partners. We have limited foreign regulatory, clinical and commercial resources. Future partners are critical to our international success. However, we may not be able to enter into collaboration agreements with appropriate partners for important foreign markets on acceptable terms, or at all. Future collaborations with foreign partners may not be effective or profitable for us.

Our business activities have been disrupted due to the outbreak of theCOVID-19 pandemic.

We face various risks and uncertainties related to the global outbreak of a new strain of coronavirus,COVID-19. In recent months, the continued spread of COVID-19 has led to disruption and volatility in the global economy and capital markets, which increases the cost of capital and adversely impacts access to capital. Government-enforced travel bans, business closures, and work-from-home or shelter-in-place orders around the world have significantly impacted our ability to conduct clinical trials, obtain supplies of needed materials and, in general, further the development of our business. It has, and may continue to, disrupt our third-party contract manufacturers and supply chain. We have also incurred increased overhead costs associated with the COVID-19 pandemic, including costs arising from protocols intended to reduce the risk of transmission among our employees and business partners. Furthermore, if significant portions of our workforce are unable to work effectively, including because of illness, quarantines, safety considerations, government actions, facility closures, remote working or other restrictions in connection with the COVID-19 pandemic, our operations will likely be adversely impacted.

Further, the COVID-19 pandemic, and the volatile global economic conditions stemming from the pandemic, could precipitate or amplify the other risks that we identify in this "*Risk Factors*" section.

We are continuing to monitor the latest developments regarding theCOVID-19 pandemic on our business, operations and financial condition and results, and have made certain assumptions regarding the pandemic for purposes of our operational planning and financial projections, including assumptions regarding the duration and severity of the pandemic and the global macroeconomic impact of the pandemic. Despite careful tracking and planning, however, we are unable to accurately predict the extent of the impact of the pandemic on our business, operations and financial condition and results due to the uncertainty of future developments. If the COVID-19 pandemic continues for a prolonged duration, the research and development of our products will be delayed and we may be unable to perform fully on our contracts, which will likely result in increases in costs and reduction in revenue. These cost increases may not be fully recoverable or adequately covered by insurance. The long-term effects of COVID-19 to the global economy and to us are difficult to assess or predict and may include a decline in the market prices of our products, risks to employee health and safety, risks for the deployment of our products and services and reduced sales in geographic locations impacted. Any prolonged restrictive measures put in place in order to control COVID-19 or other adverse public health developments in any of our targeted markets may have a material and adverse effect on our business operations and results of operations.

For additional information on how theCOVID-19 pandemic has already impacted our business, operations and financial condition and results, see our historical consolidated financial statements, presented elsewhere in this prospectus.

Global economic, political and social conditions and uncertainties in the market that we serve may adversely impact our business.

Our performance depends on the financial health and strength of our customers, which in turn is dependent on the economic conditions of the markets in which we and our customers operate. The recent declines in the global economy, difficulties in the financial services sector and credit markets, continuing geopolitical uncertainties and other macroeconomic factors all affect the spending behavior of potential customers. The economic uncertainty in Europe, the United States, India, China and other countries may cause end-users to further delay or reduce technology purchases.

We also face risks from financial difficulties or other uncertainties experienced by our suppliers, distributors or other third parties on which we rely. If third parties are unable to supply us with required materials or components or otherwise assist us in operating our business, our business could be harmed.

For example, the possibility of an ongoing trade war between the United States and China may impact the cost of raw materials, finished products or components used in our products and our ability to sell our products in markets controlled or heavily influenced by China. Other changes in U.S. social, political, regulatory and economic conditions or in laws and policies governing foreign trade, manufacturing, development and investment could also adversely affect our business. In addition, the ongoing negotiations about transitioning the United Kingdom from the European Union following its formal exit on January 31, 2020 may result in the imposition of tariffs that could have an adverse impact on our results of operation. Additionally, there also is a risk that other countries may decide to leave the European Union. This uncertainty surrounding this transition not only potentially affects our business opportunities in the United Kingdom and the European Union, but also may have an effect on global economic conditions and the stability of global financial markets, which in turn could have a material adverse effect on our business, financial condition and results of operations. In extreme cases, we could experience interruptions in production due to the processing of customs formalities or reduced customer spending in the wake of weaker economic performance. If global economic conditions remain volatile for a prolonged period or if European economies experience further disruptions, our results of operations could be adversely affected.

We may not be successful in hiring and retaining key employees.

Our future operations and successes depend in large part upon the continued service of key members of our senior management team whom we are highly dependent upon to manage our business, specifically Dr. Jonathan Javitt, our Chief Executive Officer. If he terminates employment with us, such a departure would have a material adverse effect on our business.

Our future success also depends on our ability to identify, attract, hire or engage, retain and motivate other well-qualified managerial, technical, clinical and regulatory personnel. We will need to hire additional qualified personnel with expertise in nonclinical pharmacology and toxicology, pharmaceutical development, clinical research, regulatory affairs, manufacturing, sales and marketing. We compete for qualified individuals with numerous biopharmaceutical companies, universities and other research institutions. Competition for such individuals, particularly in the United States, is intense, and we may not be able to hire sufficient personnel to support our efforts. There can be no assurance that these professionals will be available in the market, or that we will be able to retain existing professionals or to meet or to continue to meet their compensation requirements. Furthermore, the cost base in relation to such compensation, which may include equity compensation, may increase significantly, which could have a material adverse effect on us. Failure to establish and maintain an effective management team and work force could adversely affect our ability to operate, grow and manage our business.

Our employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include intentional failures to:

- comply with FDA regulations or similar regulations of comparable foreign regulatory authorities; provide accurate information to the FDA or
- comparable foreign regulatory authorities;
- comply with federal and state healthcare fraud and abuse laws and regulations and similar laws and regulations established and enforced by
- comparable foreign regulatory authorities;
- report financial information or data accurately; or

- disclose unauthorized activities to us.

In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have adopted a Business Code of Conduct, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business and results of operations, including the imposition of significant fines or other sanctions.

Our relationships with customers and payors will be subject to applicable anti-kickback, fraud and abuse, transparency, and other healthcare laws and regulations, which could expose use to criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens, and diminished profits and future earnings.

Healthcare providers, physicians and payors play a primary role in the recommendation and prescription of any product candidates for which we may obtain marketing approval. Our arrangements with payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations that may constrain the business or financial arrangements and relationships through which we market, sell and distribute any product candidates for which we may obtain marketing approval. Restrictions under applicable federal, state and foreign healthcare laws and regulations may affect our ability to operate, including:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under federal and state healthcare programs such as Medicare and Medicaid;
- the federal False Claims Act, which imposes criminal and civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- state and foreign anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental payors, including private insurers;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and its implementing regulations, which also imposes obligations on certain covered entity healthcare providers, health plans, and healthcare clearinghouses as well as their business associates that perform certain services involving the use or disclosure of individually identifiable health information, including mandatory contractual terms, with respect to safeguarding the privacy, security and transmission of individually identifiable health information;

- laws which require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restricting payments that may be made to healthcare providers; and
- federal laws requiring drug manufacturers to report information related to payments and other transfers of value made to physicians and other healthcare providers, as well as ownership or investment interests held by physicians and their immediate family members, including under the federal open payments program, as well as other state and foreign laws regulating marketing activities.

Managing our growth as we expand operations may strain our resources and we may not successfully manage our growth.

We expect to need to grow rapidly in order to support additional, larger, and potentially international, pivotal clinical trials of our drug candidates, which will place a significant strain on our financial, managerial and operational resources. In order to achieve and manage growth effectively, we must continue to improve and expand our operational and financial management capabilities. Moreover, we will need to increase staffing and to train, motivate and manage our employees. All of these activities will increase our expenses and may require us to raise additional capital sooner than expected. If we grow significantly, such growth will place a significant strain on our management and on our administrative, operational and financial resources. To manage this growth, we must expand our facilities, augment our operational, financial and management systems, internal controls and infrastructure and hire and train additional qualified personnel. Our future success is heavily dependent upon growth and acceptance of our future products. If we are unable to scale our business appropriately or otherwise adapt to anticipated growth and new product introduction, our business and financial condition will be harmed.

We may expand our business through the acquisition of rights to new drug candidates that could disrupt our business, harm our financial condition and may also dilute current stockholders' ownership interests in our company.

Our business strategy includes expanding our products and capabilities, and we may seek acquisitions of drug candidates or technologies to do so. Acquisitions involve numerous risks, including substantial cash expenditures; potentially dilutive issuances of equity securities; incurrence of debt and contingent liabilities, some of which may be difficult or impossible to identify at the time of acquisition; difficulties in assimilating the acquired technologies or the operations of the acquired companies; diverting our management's attention away from other business concerns; risks of entering markets in which we have limited or no direct experience; and the potential loss of our key employees or key employees of the acquired companies.

We cannot assure you that any acquisition will result in short-term or long-term benefits to us. We may incorrectly judge the value or worth of an acquired product, company or business. Any such transaction could also result in impairment of goodwill and other intangibles, write-offs and other related expenses. In addition, our future success would depend in part on our ability to manage the rapid growth associated with some of these acquisitions. We cannot assure you that we will be able to make the combination of our business with that of acquired products, businesses or companies work or be successful. Furthermore, the development or expansion of our business or any acquired products, business or companies may require a substantial capital investment by us. We may not have these necessary funds or they might not be available to us on acceptable terms or at all. We may also seek to raise funds by selling shares of our preferred or common stock, which could dilute each current stockholder's ownership interest in NRx Pharmaceuticals.

If we cannot compete successfully for market share against other drug companies, we may not achieve sufficient product revenues and our business will suffer.

The market for our drug candidates is characterized by intense competition and rapid technological advances. If our drug candidates receive FDA approval, they will compete with a number of existing and future drugs and therapies developed, manufactured and marketed by others. Existing or future competing products may provide greater therapeutic convenience or clinical or other benefits for a specific indication than our products, or may offer comparable performance at a lower cost. If our products are unable to capture and maintain market share, we may not achieve sufficient product revenues and our business will suffer.

We and our collaborators will compete for market share against fully integrated pharmaceutical companies or other companies that are collaborating with larger pharmaceutical companies, academic institutions, government agencies and other public and private research organizations. Many of these competitors have drugs already approved or drug candidates in development that will or may compete against our approved drug candidates. In addition, many of these competitors, either alone or together with their collaborative partners, operate larger research and development programs and have substantially greater financial resources than we do, as well as significantly greater experience in:

- developing drugs;
- conducting preclinical testing and human clinical trials;
- obtaining FDA and other regulatory approvals of drugs;
- formulating and manufacturing drugs; and
- launching, marketing, distributing and selling drugs.

Government agencies, professional and medical societies, and other groups may establish usage guidelines that apply to our law enforcement concerns over diversion of opioids and social issues around abuse of opioids may make the regulatory approval process and commercialization of our drug candidates very difficult.

Media stories regarding the diversion of opioids and other controlled substances are commonplace. Law enforcement agencies or regulatory agencies may apply policies that seek to limit the availability of opioids. Such efforts may adversely affect the regulatory approval and commercialization of our drug candidates.

Developments by competitors may render our products or technologies obsolete ornon-competitive.

Alternative technologies and products are being developed to treat depression and some may target suicidal bipolar depression and PTSD.

Numerous sponsors are attempting to develop drugs to treat criticalCOVID-19. Many of these organizations competing with us have substantially greater capital resources, larger research and development staffs and facilities, greater experience in drug development and in obtaining regulatory approvals and greater manufacturing and marketing capabilities than we do. Our competitors may market less expensive or more effective drugs that would compete with our drug candidates or reach market with competing drugs before we are able to reach market with our drug candidates. These organizations also compete with us to attract qualified personnel and partners for acquisitions, joint ventures or other collaborations.

Business interruptions could limit our ability to operate our business.

Our operations as well as those of our collaborators on which we depend are vulnerable to damage or interruption from computer viruses, human error, natural disasters, electrical and telecommunication failures, international acts of terror and similar events. We have not established a formal disaster recovery plan and our back-up operations and our business interruption insurance may not be adequate to compensate us for losses we may suffer. A significant business interruption could result in losses or damages incurred by us and require us to cease or curtail our operations.

Cyber security attacks, internal system or service failures may adversely impact our business and operations.

Any system or service disruptions, including those caused by projects to improve our information technology systems, if not anticipated and appropriately mitigated, could disrupt our business and impair our ability to effectively provide products and related services to our customers and could have a material adverse effect on our business. We could also be subject to systems failures, including network, software or hardware failures, whether caused by us, third-party service providers, intruders or hackers, computer viruses, natural disasters, power shortages or terrorist attacks. Cyber security threats are evolving and include, but are not limited to, malicious software, phishing and other unauthorized attempts to gain access to sensitive, confidential or otherwise protected information related to us or our products, customers or suppliers, or other acts that could lead to disruptions in our business. The COVID-19 pandemic has forced many of our employees to shift to work-from-home arrangements, which increases our vulnerability to email phishing, social engineering or "hacking" through our remote networks, and similar cyber-attacks aimed at employees working remotely. Because the techniques used by cyber-attackers to access or sabotage networks change frequently and may not be recognized until launched against a target, we may be unable to anticipate these tactics. Any such failures to prevent or mitigate cyber-attacks could cause loss of data and interruptions or delays in our business, cause us to incur remediation costs or subject us to claims and damage our reputation. In addition, the failure or disruption of our communications or utilities could cause us to interrupt or suspend our operations or otherwise adversely affect our business. Although we utilize various procedures and controls to monitor and mitigate the risk of these threats, including contracting with an outside cyber security firm to provide constant monitoring of our systems, and training our employees to recognize attacks, there can be no assurance that these procedures and controls will be sufficient. Our property and business interruption insurance may be inadequate to compensate us for all losses that may occur as a result of any system or operational failure or disruption which would adversely affect our business, results of operations and financial condition. Moreover, expenditures incurred in implementing cyber security and other procedures and controls could adversely affect our results of operations and financial condition.

Failure to achieve and maintain effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act") could impair our ability to produce timely and accurate financial statements or comply with applicable regulations and have a material adverse effect on our business.

Our management has significant requirements for enhanced financial reporting and internal controls as a public company. The process of designing and implementing effective internal controls is a continuous effort that will require us to anticipate and react to changes in our business and the economic and regulatory environments and to expend significant resources to maintain a system of internal controls that is adequate to satisfy our reporting obligations as a public company. If we are unable to establish maintain appropriate internal financial reporting controls and procedures, it could cause us to fail to meet our reporting obligations on a timely basis or result in material misstatements in our consolidated financial statements, which could harm our operating results. In addition, we will be required, pursuant to Section 404 of the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. The rules governing the standards that must be met for our management to assess our internal control over financial reporting are complex and require significant documentation, testing, and possible remediation. Testing and maintaining internal controls may divert management's attention from other matters that are important to our business. Our independent registered public accounting firm will be required to attest to the effectiveness of our internal control over financial reporting on an annual basis. However, while we remain an emerging growth company, we will not be required to include an attestation report on internal control over financial reporting issued by our independent registered public accounting firm. If we are not able to complete our initial assessment of our internal controls and otherwise implement the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner or with adequate compliance, our independent registered public accounting firm may not be able to certify as to the adequacy of our internal controls over financial reporting.

Matters impacting our internal controls may cause us to be unable to report our financial information on a timely basis and thereby subject us to adverse regulatory consequences, including sanctions by the SEC or violations of applicable stock exchange listing rules, which may result in a breach of the covenants under existing or future financing arrangements. There also could be a negative reaction in the financial markets due to a loss of investor confidence in us and the reliability of our financial statements. Confidence in the reliability of our financial statements also could suffer if we or our independent registered public accounting firm continue to report a material weakness in our internal controls over financial reporting. This could materially adversely affect us and lead to a decline in the market price of our common stock.

Risks Related to Clinical and Regulatory Matters

If we fail to obtain the necessary regulatory approvals, or if such approvals are limited, we will not be allowed to commercialize our drug candidates, and we will not generate product revenues.

Satisfaction of all regulatory requirements for commercialization of a drug candidate typically takes many years, is dependent upon the type, complexity and novelty of the product candidate, and requires the expenditure of substantial resources for research and development. Our research and clinical approaches may not lead to drugs that the FDA considers safe for humans and effective for indicated uses we are studying. The FDA may require additional studies, in which case we and any product collaborators would have to expend additional time and resources and would likely delay the date of potentially receiving regulatory approval. The approval process may also be delayed by changes in government regulation, future legislation or administrative action or changes in FDA policy that occur prior to or during our regulatory review.

Delays in obtaining regulatory approvals would:

- delay commercialization of, and product revenues from, our product candidates; and
- diminish the competitive advantages that we may have otherwise enjoyed, which would have an adverse effect on our operating results and financial condition.

Even if we comply with all FDA regulatory requirements, our product candidates may never obtain regulatory approval. If we fail to obtain regulatory approval for any of our product candidates we will have fewer commercial products, if any, and corresponding lower product revenues, if any.

In jurisdictions outside the United States, we and any local collaborators we work with must receive marketing authorizations from the appropriate regulatory authorities before commercializing our drugs. Regulatory approval processes outside the United States generally include all of the aforementioned requirements and risks associated with FDA approval, and may impose different or additional steps not required by the FDA.

Even if a drug product is approved, the FDA may impose limitations on the use or marketing of such product.

Even if our product candidates receive regulatory approval from the FDA, the FDA may limit the approved indications for use of the product, require that contraindications, warnings or precautions be included in the product labeling, including a black boxed warning. The FDA may also require us or our collaborators to commit to perform lengthy Phase 4 post-approval clinical efficacy or safety studies, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution restrictions or other risk management mechanisms that could materially affect the potential market and profitability of the product. Our expending of additional resources on such trials or programs would have an adverse effect on our operating results and financial condition.

After approval, certain circumstances may require additional FDA notification, review, or approval, as well as further testing. These may include some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, or new safety information.

After approval, later discovery of previously unknown problems with a product will have adverse consequences for us.

Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in mandatory revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks; or imposition of distribution or other restrictions under a Risk Evaluation and Mitigation Strategies ("REMS") program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, Warning Letters or Untitled Letters, holds or termination of post-approval clinical trials or FDA debarment;
- delay or refusal of the FDA to approve pending NDAs or supplements to approved NDAs, or suspension or revocation of product license approvals;
- regulatory authority, including the FDA, issued safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings about such products;
- mandated modifications to promotional material or issuance of corrective information;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties, including imprisonment, disgorgement and restitution, as well as consent decrees, corporate integrity agreements, deferred prosecution agreements and exclusion from federal healthcare programs.

If we are unable to design, conduct and complete clinical trials successfully, our drug candidates will not be able to receive regulatory approval.

In order to obtain FDA approval for any of our drug candidates, we must submit to the FDA an NDA that demonstrates with substantive evidence that the drug candidate is both safe and effective in humans for its intended use. This demonstration requires significant research and animal tests, which are referred to as preclinical studies, as well as human tests, which are referred to as clinical trials.

Results from Phase 1 clinical programs may not support moving a drug candidate to Phase 2 or Phase 3 clinical trials. Phase 3 clinical trials may not demonstrate the safety or efficacy of our drug candidates. Success in preclinical studies and early clinical trials does not ensure that later clinical trials will be successful. Results of later clinical trials may not replicate the results of prior clinical trials and preclinical studies. Even if the results of Phase 3 clinical trials are positive, we may have to commit substantial time and additional resources to conducting further preclinical studies and clinical trials before obtaining FDA approval for any of our drug candidates.

Clinical trials are very expensive and difficult to design and implement, in part because they are subject to rigorous requirements. The clinical trial process also consumes a significant amount of time. Furthermore, if participating patients in clinical trials suffer drug-related adverse reactions during the course of such clinical trials, or if we or the FDA believe that participating patients are being exposed to unacceptable health risks, such clinical trials will have to be suspended or terminated. Failure can occur at any stage of the clinical trials, and we could encounter problems that cause abandonment or repetition of clinical trials. The success in clinical trials depends on reaching statistically significant changes in patients' symptoms based on clinician-rated scales. Due in part to a lack of consensus on standardized processes for assessing clinical outcomes, these scores may or may not be reliable, useful or acceptable to regulatory agencies.

We do not know whether any of our planned clinical trials will result in marketable drugs. In addition, completion of clinical trials can be delayed by numerous factors, including:

- delays in identifying and agreeing on acceptable terms with prospective clinical trial sites;
- slower than expected rates of patient recruitment and enrollment;
- unanticipated patient dropout rates; and

- increases in time required to complete monitoring of patients during or after participation in a clinical trial.

Any of these delays could significantly impact the timing, approval and commercialization of our drug candidates and could significantly increase our overall costs of drug development.

Even if clinical trials are completed as planned, their results may not support expectations or intended marketing claims. The clinical trials process may fail to demonstrate that our drug candidates are safe and effective for indicated uses. Such failure would cause us to abandon a drug candidate and could delay development of other drug candidates.

We cannot predict whether regulatory agencies will determine that the data from our clinical trials of our product candidates supports marketing approval.

The FDA's and other regulatory agencies' decision to approve our drug candidates will depend on our ability to demonstrate with substantial clinical evidence through well-controlled clinical trials, that the product candidates are effective, as measured statistically by comparing the overall improvement in actively-treated patients against improvement in the control group (usually a placebo control). However, there is a possibility that our data may fail to show a statistically significant difference from the placebo-control or the active control. Alternatively, there is a possibility that our data may be statistically significant, but that the actual clinical benefit of the product candidates may not be considered to be clinically significant, clinically relevant or clinically meaningful. Consequently, we believe that the FDA may consider additional data, such as a "responder" analysis, secondary efficacy endpoints and safety when evaluating whether our product candidates can be approved. We cannot predict whether the regulatory agencies will find that our clinical trial results provide compelling "responder" or other secondary endpoint data. Even if we believe that the data from our trials will support marketing approval in the United States or in Europe, we cannot predict whether the agencies will agree with our analysis and approve our applications.

There is no guarantee that the FDA will grant NDA approval of our current or future product candidates and failure to obtain necessary clearances or approvals for our current and future product candidates would adversely affect our ability to grow our business.

We have completed a Phase IIb/III clinical trial for ZYESAMI, the NRxCOVID-19 Drug, applied for FDA Emergency Use Authorization on May 31, 2021, and in the future expect to submit an NDA to the FDA for approval of ZYESAMI for the treatment of COVID-19 based on the recently completed clinical trial and additional clinical trials currently underway, including the NIH ACTIV3b/TESICO trial (NCT 04843761).

We initiated a Phase IIb/III clinical research program ofNRX-101 during the second half of 2017 under an FDA Investigational New Drug ("IND") application that was granted Fast Track designation by the FDA in August 2017 and was granted Breakthrough Therapy designation by the FDA in November 2018. In April 2018, the FDA granted a Special Protocol Agreement. We successfully completed a Phase II clinical trial of NRX-101 in patients with Severe Bipolar Depression and Acute Suicidal Ideation following stabilization with a single dose of ketamine and saw a statistically significant reduction in depression (P=0.04) and suicidal ideation (P=0.02) compared to lurasidone alone over 42 days of treatment. No Serious Adverse Events or dose-limiting adverse events were seen in the NRX-101 group. If this statistically-significant advantage is replicated in the Phase III clinical trial, under the terms agreed to with the FDA in our Special Protocol Agreement, we aim to submit an NDA to the FDA for the regulatory approval and commercialization of NRX-101 in the United States by year end 2021 and marketing authorization applications ("MAAs") with the European Medicines Agency ("EMA") by 2022.

However, we cannot assure you that the FDA will approve or clear ZYESAMI,NRX-101, or other product candidates for the indications that are necessary or desirable for successful commercialization. Indeed, the FDA may refuse our requests for NDA market approval of new products, new intended uses or indications to existing or future products. Failure to receive approval for our new products would have an adverse effect on our ability to expand our business.

With respect to clinical trials, discussions and guidance are not binding obligations on the part of regulatory authorities.

Regulatory authorities may revise previous guidance or decide to ignore previous guidance at any time during the course of our clinical activities or after the completion of our clinical trials. Even with successful clinical safety and efficacy data, including such data from a clinical trial conducted pursuant to a special protocol agreement, we may be required to conduct additional, expensive clinical trials to obtain regulatory approval.

The results of our current or future clinical trials may not support our product candidate claims or may result in the discovery of unexpected adverse side effects.

Even if our clinical trials are completed as planned, we cannot be certain that their results will support our drug candidates' claims or that the FDA or foreign authorities will agree with our conclusions regarding them. Success in pre-clinical studies and early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the later trials will replicate the results of prior trials and pre-clinical studies. In particular, our clinical trials performed until now involve a relatively small patient population. Because of the small sample size, their results may not be indicative of future results. It is also possible that patients enrolled in clinical trials will experience adverse side effects that are not currently part of the product candidate's profile. Accordingly, the clinical trial process may fail to demonstrate that our drug candidates are safe and effective for the proposed indicated uses. If FDA concludes that the clinical trials for any of our products for which we might seek clearance have failed to demonstrate safety and effectiveness, we would not receive FDA clearance to market that product in the United States for the indications sought. In addition, such an outcome could cause us to abandon the product candidate and might delay development of others. Any delay or termination of our clinical trials will delay the filing of any product submissions with the FDA or foreign authorities and, ultimately, our ability to commercialize our product candidates and generate revenues.

Delays in the commencement or completion of pharmaceutical development, manufacturing or clinical efficacy and safety testing could result in increased costs to us and delay our ability to generate revenues.

We do not know whether our pharmaceutical development, manufacturing or clinical efficacy and safety testing will begin on time or be completed on schedule, if at all. For example, we may encounter delays during the manufacture of pilot scale batches including delays with our contract development or manufacturing organization, sourcing satisfactory quantities of active pharmaceutical ingredient, narcotic import and export permits, sourcing of excipients, contract disputes with our third-party vendors and manufacturers, or failure of the product to meet specification.

The commencement and completion of clinical trials can be disrupted for a variety of reasons, including difficulties in:

- recruiting and enrolling patients to participate in a clinical trial;
- obtaining regulatory approval to commence a clinical trial;
- reaching agreement on acceptable terms with prospective clinical research organizations and trial sites;
- manufacturing sufficient quantities of a product candidate;
- investigator fraud, including data fabrication by clinical trial personnel;
- diversion of controlled substances by clinical trial personnel; and
- A clinical trial may also be suspended or terminated by us, the FDA or other regulatory authorities due to a number of factors, including:

- failure to conduct the clinical trial in accordance with regulatory requirements or in accordance with our clinical protocols;
- inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold;
- unforeseen safety issues; or
- inadequate patient enrollment or lack of adequate funding to continue the clinical trial.

In addition, changes in regulatory requirements and guidance may occur and we may need to amend clinical trial protocols to reflect these changes, which could impact the cost, timing or successful completion of a clinical trial. If we experience delays in the commencement or completion of our clinical trials, the commercial prospects for our product candidates will be harmed, and our ability to generate product revenues will be delayed. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also lead to the denial of regulatory approval of a product candidate.

May require the enrollment of large numbers of patients, and suitable patients may be difficult to identify and recruit.

Patient enrollment in clinical trials and completion of patient participation andfollow-up depends on many factors, including the size of the patient population; the nature of the trial protocol; the attractiveness of, or the discomforts and risks associated with, the treatments received by enrolled subjects; the availability of appropriate clinical trial investigators; support staff; the number of ongoing clinical trials in the same indication that compete for the same patients; and proximity of patients to clinical sites and ability to comply with the eligibility and exclusion criteria for participation in the clinical trial and patient compliance. For example, patients may be discouraged from enrolling in our clinical trials if the trial protocol requires them to undergo extensive post-treatment procedures or follow-up to assess the safety and effectiveness of our products or if they determine that the treatments received under the trial protocols are not attractive or involve unacceptable risks or discomforts. Patients may also not participate in our clinical trials if they choose to participate in contemporaneous clinical trials of competitive products.

Development of sufficient and appropriate clinical protocols to demonstrate safety and efficacy are required and we may not adequately develop such protocols to support clearance and approval.

The FDA may require us to submit data on a greater number of patients than we originally anticipated and/or for a longerfollow-up period or change the data collection requirements or data analysis applicable to our clinical trials. They may also require additional data on certain categories of patients, should it emerge during the conduct of our clinical trials that certain categories of patients are likely to be affected in different and/or additional manner than most of the patients. In addition to FDA requirements, our clinical trial requires the approval of the institutional review board, or IRB, at each site selected for participation in our clinical trial.

Additional delays to the completion of clinical studies may result from modifications being made to the protocol during the clinical trial, if such modifications are warranted and/or required by the occurrences in the given trial.

We may choose to make modifications to a clinical trial protocol during the clinical trial if such modifications are warranted and/or required by the occurrences in the trial. Each of such modifications has to be submitted to the FDA. This could result in the delay or halt of a clinical trial while the modification is evaluated. In addition, depending on the magnitude and nature of the changes made, the FDA could take the position that the data generated by the clinical trial cannot be pooled because the same protocol was not used throughout the trial. This might require the enrollment of additional subjects, which could result in the extension of the clinical trial and the FDA delaying clearance or approval of a product.

There can be no assurance that the data generated using modified protocols will be acceptable to the FDA.

There can be no assurance that the data generated using modified protocols will be acceptable to the FDA or that if future modifications during the trial are necessary, any such modifications will be acceptable to the FDA. If the FDA believes that its prior approval is required for a particular modification, it can delay or halt a clinical trial while it evaluates additional information regarding the change.

If an adverse event occurs during a clinical trial, the FDA or an IRB may delay or terminate the trial, which could adversely affect our business and prospects.

Serious injury or death resulting from a failure of one of our drug candidates during current or future clinical trials could result in the FDA delaying our clinical trials or denying or delaying clearance or approval of a product. Even though an adverse event may not be the result of the failure of our drug candidate, the FDA or an IRB could delay or halt a clinical trial for an indefinite period of time while an adverse event is reviewed, and likely would do so in the event of multiple such events.

Any delay or termination of our current or future clinical trials as a result of the risks summarized above, including delays in obtaining or maintaining required approvals from IRBs, delays in patient enrollment, the failure of patients to continue to participate in a clinical trial, and delays or termination of clinical trials as a result of protocol modifications or adverse events during the trials, may cause an increase in costs and delays in the filing of any product submissions with the FDA, delay the approval and commercialization of our products or result in the failure of the clinical trial, which could adversely affect our business, operating results and prospects. Lengthy delays in the completion of clinical trials of our products would adversely affect our business and prospects and could cause us to cease operations.

Developments by competitors may establish standards of care that affect our ability to conduct our clinical trials as planned.

Changes in standards related to clinical trial design could affect our ability to design and conduct clinical trials as planned. For example, regulatory authorities may not allow us to compare our drug candidates to placebo in a particular clinical indication where approved products are available. In that case, both the cost and the amount of time required to conduct a clinical trial could increase.

Even if our products are approved by regulatory authorities, if we or our suppliers fail to comply with ongoing FDA regulation or if we experience unanticipated problems with our products, these products could be subject to restrictions or withdrawal from the market.

Any product for which we obtain clearance or approval, and the manufacturing processes, reporting requirements, post-approval clinical data and promotional activities for such product, will be subject to continued regulatory review, oversight and periodic inspections by the FDA. In particular, we and our suppliers are required to comply with the FDA's Quality System Regulations, or QSR, and International Standards Organization, or ISO, regulations for the manufacture of our products and other regulations which cover the methods and documentation of the design, testing, production, control, quality assurance, labeling, packaging, storage and shipping of any product for which we obtain clearance or approval. Regulatory bodies, such as the FDA, enforce these regulations through periodic inspections. The failure by us or one of our suppliers to comply with applicable statutes and regulations administered by the FDA and other regulatory bodies, or the failure to timely and adequately respond to any adverse inspectional observations or product safety issues could result in, among other things, enforcement actions by the FDA.

If any of these actions were to occur it would harm our reputation and cause our product sales and profitability to suffer and may prevent us from generating revenue. Furthermore, our key component suppliers may not currently be or may not continue to be in compliance with all applicable regulatory requirements which could result in our failure to produce our products on a timely basis and in the required quantities, if at all.

Even if regulatory clearance or approval of a product is granted, such clearance or approval may be subject to limitations on the intended uses for which the product may be marketed and reduce the potential to successfully commercialize the product and generate revenue from the product. If the FDA determines that the product promotional materials, labeling, training or other marketing or educational activities constitute promotion of an unapproved use, it could request that we or our commercialization partners cease or modify our training or promotional materials or subject us to regulatory enforcement actions. It is also possible that other federal, state or foreign enforcement authorities might take action if they consider such training or other promotional materials to constitute promotion of an unapproved use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false claims for reimbursement.

In addition, we may be required to conduct costly post-market testing and surveillance to monitor the safety or effectiveness of our products, and we must comply with adverse event and pharmacovigilance reporting requirements, including the reporting of adverse events which occur in connection with, and whether or not directly related to, our products. Later discovery of previously unknown problems with our products, including unanticipated adverse events or adverse events of unanticipated severity or frequency, manufacturing problems, or failure to comply with regulatory requirements, may result in changes to labeling, restrictions on such products or manufacturing processes, withdrawal of the products from the market, voluntary or mandatory recalls, a requirement to recall, replace or refund the cost of any product we manufacture or distribute, fines, suspension of regulatory approvals, product seizures, injunctions or the imposition of civil or criminal penalties which would adversely affect our business, operating results and prospects.

Future government regulation may affect the commercialization of our product candidate.

We cannot predict the likelihood, nature or extent of adverse government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are not able to maintain regulatory compliance, we may be subject to fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution. Any of these events could prevent us from marketing our drugs and our business could suffer. If time and resources devoted are limited or there is a failure to fund the continued development of our drug candidates or there is otherwise a failure to perform as we expect to do, we may not achieve clinical and regulatory milestones and regulatory submissions and related product introductions may be delayed or prevented, and revenues that we would receive from these activities will be less than expected.

Conducting clinical trials of our drug candidates or commercial sales of a drug candidate may expose us to expensive product liability claims and we may not be able to maintain product liability insurance on reasonable terms or at all.

The risk of product liability is inherent in the testing of pharmaceutical products. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit or terminate testing of one or more of our drug candidates. Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against product liability claims could prevent or inhibit the commercialization of our drug candidates. We currently carry clinical trial insurance but do not carry product liability insurance. If we successfully commercialize one or more of our drug candidates, we may face product liability claims, regardless of FDA approval for commercial manufacturing and sale. We may not be able to obtain such insurance at a reasonable cost, if at all. Even if our agreements with any current or future corporate collaborators entitle us to indemnification against product liability losses, such indemnification may not be available or adequate should any claim arise.

The use of a controlled substance in our NRX-100 drug candidate subjects us to DEA scrutiny and compliance, which may result in additional expense and clinical delays.

The U.S. Drug Enforcement Administration, or DEA, regulates chemical compounds as Schedule I, II, III, IV or V substances, with Schedule I substances considered to present the highest risk of substance abuse and Schedule V substances the lowest risk. One of the ingredients in the NRx Antidepressant Drug Regimen, NRX-100, is ketamine, a Schedule III controlled substance with high abuse potential. Consequently, the manufacture, research, shipment, storage, sale and use of this drug candidate is subject to a high degree of oversight and regulation. None of our other drugs currently under development, including NRX-101 and ZYESAMI, include a scheduled chemical compound.

DEA oversight and regulation can have the following impact on our efforts to develop new drug candidates:

- interference with, or limits on, the supply of the drugs used in clinical trials for our product candidates, and, in the future, the ability to produce and distribute our products in the volume needed to meet commercial demand;
- the FDA provides recommendations to DEA as to whether a drug should be scheduled as a controlled substance and the appropriate level of control; if DEA scheduling is required, a drug product may not be marketed until the scheduling process is completed, which could delay the launch of the product;
- depending on the Schedule, drug products may be subject to registration, security, recordkeeping, reporting, storage, distribution, importation, exportation, inventory, quota and other requirements administered by the DEA, which are directly applicable to product applicants, contract manufacturers, distributors, prescribers and dispensers of controlled substances.
- the DEA regulates the handling of controlled substances through a closed chain of distribution. This control extends to the equipment and raw materials used in their manufacture and packaging in order to prevent loss and diversion into illicit channels of commerce, which limits our ability to increase the availability of any controlled substances needed for clinical trials or commercial manufacturing.

Annual registration is required for any facility that manufactures, distributes, dispenses, imports or exports any controlled substance. The registration is specific to the particular location, activity and controlled substance schedule. For example, separate registrations are needed for import and manufacturing, and each registration will specify which schedules of controlled substances are authorized. Similarly, separate registrations are also required for separate facilities.

There are substantial penalties for failing to comply with DEA regulations.

The DEA typically inspects a facility to review its security measures prior to issuing a registration and on a periodic basis. Security requirements vary by controlled substance schedule, with the most stringent requirements applying to Schedule I and Schedule II substances. However, records must be maintained for the handling of all controlled substances, and periodic reports may be required to made to the DEA for the distribution of certain controlled substances. Reports must also be made for thefts or significant losses of any controlled substance. To enforce these requirements, the DEA conducts periodic inspections of registered establishments that handle controlled substances. Failure to maintain compliance with applicable requirements, particularly as manifested in loss or diversion, can result in administrative, civil or criminal enforcement. The DEA may seek civil penalties, refuse to renew necessary registrations, or initiate administrative proceedings to revoke those registrations. In some circumstances, violations could result in criminal proceedings or consent decrees. Individual states also independently regulate controlled substances.

There are limitations on the availability of controlled substances used in NRX-100 that may limit the availability of the active ingredients in certain of the NRx Antidepressant Drug Regimen.

The DEA limits the availability and production of all scheduled substances, including ketamine, through a quota system. The DEA requires substantial evidence and documentation of expected legitimate medical and scientific needs before assigning quotas to manufacturers. In future years, we may need greater amounts of controlled substances to sustain our Phase IIb/III development program for the NRx Antidepressant Drug Regimen, and we will need significantly greater amounts to implement our commercialization plans if the FDA approves our proposed formulations. Any delay or refusal by the DEA in establishing the procurement quota or a reduction in our quota for scheduled controlled substances or a failure to increase it over time as we anticipate could delay or stop the clinical development or commercial sale of some of our products or product candidates. This could have a material adverse effect on our business, results of operations, financial condition and prospects.

We may not be able to demonstrate the reduced risk we believe is applicable.

Schedule III drugs have lower abuse potential than Schedule I and II drugs. However, despite the foregoing reduced risk of abuse from Schedule III drugs, when compared to Schedule II drugs, there is no assurance that such reduced risk can be demonstrated in well controlled non-clinical and/or clinical studies in models of physical dependence, psychic dependence, addiction or precipitated withdrawal, or in studies of addiction or abuse liability in addicts, ex-addicts or recreational drug users. In the event that a reduced risk of abuse from Schedule III drugs, when compared to Schedule II drugs, is demonstrated in well controlled non-clinical and/or clinical studies, there is no assurance that the FDA will agree to incorporation of such favorable language in the products prescribing information.

The use of controlled substances in our product candidates may generate controversy.

Products containing controlled substances may generate public controversy. Opponents of these products may seek restrictions on marketing and withdrawal of any regulatory approvals. In addition, these opponents may seek to generate negative publicity in an effort to persuade the medical community to reject these products. Political pressures and adverse publicity could lead to delays in, and increased expenses for, and limit or restrict the introduction and marketing of, our product candidates.

We may need to focus our future efforts in new therapeutic areas where we have little or no experience.

Although our primary strategic interests are in the areas of depression andCOVID-19 therapies, ZYESAMI and NRX-101 have potential benefits in other therapeutic areas. If our drug development efforts in bipolar depression fails, or if the competitive landscape or investment climate for antidepressant drug development or COVID-19 therapies is less attractive, we may need to change our strategic focus to include development of our product candidates, or of newly acquired product candidates, for therapeutic areas other than depression and COVID-19. We have very limited drug development experience in other therapeutic areas and we may be unsuccessful in making this change to a company with a focus in areas other than depression and COVID-19 or a company with a focus in multiple therapeutic areas including depression and COVID-19.

Some of our products for clinical trials may be manufactured outside the United States.

There is no guarantee that we will secure a supply agreement with a manufacturer based in the United States. Switching or adding manufacturing capability outside the United States can involve substantial cost and require extensive management time and focus, additional regulatory filings and compliance with import/export regulations. In addition, there is a natural transition period when a new manufacturing facility commences work. As a result, delays may occur, which can materially impact our ability to meet our desired timelines, thereby increasing our costs and reducing our ability to generate revenue.

Modifications to our products may require new NDA approvals.

Once a particular company product receives FDA approval or clearance, expanded uses or uses in new indications of our products may require additional human clinical trials and new regulatory approvals or clearances, including additional IND and NDA submissions and premarket approvals before we can begin clinical development, and/or prior to marketing and sales. If the FDA requires new clearances or approvals for a particular use or indication, we may be required to conduct additional clinical studies, which would require additional expenditures and negatively impact our operating results. If the products are already being used for these new indications, we may also be subject to significant enforcement actions.

Conducting clinical trials and obtaining clearances and approvals can be a time-consuming process, and delays in obtaining required future clearances or approvals could adversely affect our ability to introduce new or enhanced products in a timely manner, which in turn would harm our future growth.

Some of our other product candidates will require Risk Evaluation and Mitigation Strategies (REMS).

The FDA Amendments Act of 2007 implemented safety-related changes to product labeling and requires the adoption of REMS. Some of our product candidates, including the controlled substance-based products and potentially others, will require REMS. The REMS may include requirements for special labeling or medication guides for patients, special communication plans to health care professionals and restrictions on distribution and use.

We cannot predict the specific REMS to be required as part of the FDA's approval of any of our products. Depending on the extent of the REMS requirements, our costs to commercialize our products may increase significantly. Furthermore, controlled substances risks that are not adequately addressed through proposed REMS for our product candidates may also prevent or delay their approval for commercialization.

We are reliant on third party manufacturers to produce controlled substances that conform to our specifications and the FDA's strict regulatory requirements.

The facilities of any of our future manufacturers of controlled substances must be approved by the FDA after we submit our NDA and before approval. We are dependent on the continued adherence of third party manufacturers to cGMP manufacturing. If our manufacturers cannot successfully produce material that conforms to our specifications and the FDA's strict regulatory requirements, they will not be able to secure FDA approval for their manufacturing facilities. If the FDA does not approve these facilities for the commercial manufacture, we will need to find alternative suppliers, which would result in significant delays in obtaining FDA approvals. These challenges may have a material adverse impact on our business, results of operations, financial condition and prospects.

Risks Related to Intellectual Property

Our formation of ZYESAMI is not covered by an existing patent and may be subject to future generic competition.

ZYESAMI is not currently covered by any US or international patent. US Patent 8178489B2 and foreign counterparts does not apply to ZYESAMI because it covers only formulations of aviptadil that are formulated in a buffer. Laboratory evidence suggests that Vasoactive Intestinal Peptide (aviptadil) aggregates and may be inactivated by known buffers. We are engaged in a discovery process to extend the stability of ZYESAMI and has made certain discoveries that may lead to future patent filings and which may or may not lead to allowed patent claims. In the event that no patent protection is granted covering the formulation of ZYESAMI, if the drug is approved by FDA, it is anticipated to receive at least five years of data exclusivity from the FDA under what is commonly known as "paragraph 4" protections. Should no patents be granted by the end of this data exclusivity period, competitors may be able to market generic versions of ZYESAMI.

Our business relies on certain licensing rights that can be terminated in certain circumstances.

Our ability to continue to develop our product candidates is dependent on the use of certain intellectual property that is licensed to us, or in the process of being licensed to us, by third parties. These licenses are granted, or being granted, pursuant to agreements setting forth certain terms and condition for maintaining such licenses. In the event that the terms and conditions are not met, the licenses are at risk of being revoked and the granting process may be terminated. The primary license agreements include the Glytech License, the Herzog License, the SUNY License and the Relief Agreement with Relief Therapeutics.

We may require additional licensing rights in the future, which may not be attainable.

Our ability to fully develop the full commercial potential of our product candidates may require NRx Pharmaceuticals to acquire additional licensing rights from third parties in the future. There are no assurances that such rights will be available in the market when required, or that an agreement could be reached to license such rights from a third party on terms acceptable to NRx Pharmaceuticals.

We may not succeed atin-licensing drug candidates or technologies to expand our product pipeline.

We may not be able to successfullyin-license (i.e., licensing of patent technology or know-how developed by a third party in lieu of developing the technology ourselves) drug candidates or technologies to expand our product pipeline. The number of such candidates and technologies is limited. Competition among large pharmaceutical companies and biopharmaceutical companies for promising drug candidates and technologies is intense because such companies generally desire to expand their product pipelines through in-licensing. If we are unable to carry out such in-licensing and expand our product pipeline, our potential future revenues may suffer.

Our business depends upon securing and protecting critical intellectual property.

Our commercial success will depend in part on our obtaining and maintaining patent, trade secret, copyright and trademark protection of our technologies in the United States and other jurisdictions as well as successfully enforcing this intellectual property and defending this intellectual property against third-party challenges. We will only be able to protect our technologies from unauthorized use by third parties to the extent that valid and enforceable intellectual property protection, such as patents or trade secrets, cover them. In particular, we place considerable emphasis on obtaining patent and trade secret protection for significant new technologies, products and processes. Furthermore, the degree of future protection of our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. Moreover, the degree of future protection of our proprietary rights is uncertain for products that are currently in the early stages of development because we cannot predict which of these products will ultimately reach the commercial market or whether the commercial versions of these products will incorporate proprietary technologies.

Our patent position is highly uncertain and involves complex legal and factual questions.

Our patent position is highly uncertain and involves complex legal and factual questions. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. For example, we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and issued patents; we or our licensors might not have been the first to file patent applications for these inventions; others may independently develop similar or alternative technologies or duplicate any of our technologies; it is possible that none of our pending patent applications or the pending patent applications of our licensors will result in issued patents; our issued patents and issued patents of our licensors may not provide a basis for commercially viable technologies, or may not provide us with any competitive advantages, or may be challenged and invalidated by third parties; and, we may not develop additional proprietary technologies that are patentable.

As a result, the validity of our owned and licensed patents may be challenged and we may not be able to obtain and enforce patents and to maintain trade secret protection for the full commercial extent of our technology. The extent to which we are unable to do so could materially harm our business.

We or our licensors have applied for and will continue to apply for patents for certain products. Such applications may not result in the issuance of any patents, and any patents now held or that may be issued may not provide us with adequate protection from competition. Furthermore, it is possible that patents issued or licensed to us may be challenged successfully. In that event, if we have a preferred competitive position because of such patents, any preferred position held by us would be lost. If we are unable to secure or to continue to maintain a preferred position, we could become subject to competition from the sale of generic products. Failure to receive, inability to protect, or expiration of our patents would adversely affect our business and operations.

Patents issued or licensed to us may be infringed by the products or processes of others. The cost of enforcing our patent rights against infringers, if such enforcement is required, could be significant, and we do not currently have the financial resources to fund such litigation. Further, such litigation can go on for years and the time demands could interfere with our normal operations and may absorb significant management time. There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical industry. We may become a party to patent litigation and other proceedings. The cost to us of any patent litigation, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation more effectively than we can because of their substantially greater financial resources.

Unpatented trade secrets, improvements, confidential know-how and continuing technological innovation are important to our scientific and commercial success. Although we attempt to and will continue to attempt to protect our proprietary information through reliance on trade secret laws and the use of confidentiality agreements with our corporate partners, collaborators, employees and consultants and other appropriate means, these measures may not effectively prevent disclosure of our proprietary information, and, in any event, others may develop independently, or obtain access to, the same or similar information.

If we are found to be infringing on patents or trade secrets owned by others, we may be forced to cease or alter our product development efforts, obtain a license to continue the development or sale of our products, and/or pay damages.

Our manufacturing processes and potential products may violate proprietary rights of patents that have been or may be granted to competitors, universities or others, or the trade secrets of those persons and entities. As the pharmaceutical industry expands and more patents are issued, the risk increases that our processes and potential products may give rise to claims that they infringe the patents or trade secrets of others. These other persons could bring legal actions against us claiming damages and seeking to enjoin clinical testing, manufacturing and marketing of the affected product or process. If any of these actions are successful, in addition to any potential liability for damages, we could be required to obtain a license in order to continue to conduct clinical tests, manufacture or market the affected product or use the affected process. Required licenses may not be available on acceptable terms, if at all, and the results of litigation are uncertain. If we become involved in litigation or other proceedings, it could consume a substantial portion of our financial resources and the efforts of our personnel.

Our ability to protect and enforce our patents does not guaranty that we will secure the right to commercialize our patents.

A patent is a limited monopoly right conferred upon an inventor, and his successors in title, in return for the making and disclosing of a new and non-obvious invention. This monopoly is of limited duration but, while in force, allows the patent holder to prevent others from making and/or using his invention. While a patent gives the holder this right to exclude others, it is not an authorization to commercialize the invention, where other permissions may be required for permissible commercialization to occur. For example, a drug cannot be marketed without the appropriate authorization from the FDA, regardless of the existence of a patent covering the product. Further, the invention, even if patented itself, may not be able to be successfully commercialized if it infringes the valid patent rights of another party.

We rely on confidentiality agreements to protect our trade secrets. If these agreements are breached by our employees or other parties, our trade secrets may become known to our competitors.

We rely on trade secrets that we seek to protect through confidentiality agreements with our employees and other parties. If these agreements are breached, our competitors may obtain and use our trade secrets to gain a competitive advantage over us. We may not have any remedies against our competitors and any remedies that may be available to us may not be adequate to protect our business or compensate us for the damaging disclosure. In addition, we may have to expend resources to protect our interests from possible infringement by others.

If we are unable to obtain the statutory patent extension related to the review time in the United States, we may need to rely on the 3-year Hatch-Waxman Act marketing exclusivity, the six month pediatric exclusivity, any approved 7- year Orphan Drug exclusivities, potential future formulation patents and up to ten years of data exclusivity in Europe. See "*Risks Related to Clinical and Regulatory Matters — We may not be able to obtainHatch-Waxman Act marketing exclusivity or equivalent regulatory data exclusivity protection in other jurisdictions for our products*."

We may not receive royalty or milestone revenue relating to our product candidates under our collaboration and future license agreements for several years, or at all.

We expect that our future collaboration agreements and future license agreements relating to our product candidates will provide for payments on achievement of development or commercialization milestones and for royalties on product sales. However, because none of our drug candidates has been approved for commercial sale, many of our drug candidates are at early stages of development and drug development entails a high risk of failure, we may never realize much of the milestone revenue provided for in our future collaboration and future license agreements and we do not expect to receive any royalty revenue for several years, if at all. Similarly, drugs we select to commercialize ourselves, or partner for later stage co-development and commercialization, may not generate revenue for several years, or at all.

Risks Related to Our Reliance on Third Parties

We do not have direct control of third parties performing preclinical and clinical trials.

We may depend on independent investigators and collaborators, such as universities and medical institutions, to conduct our preclinical and clinical trials under agreements with us. These investigators and collaborators are not our employees and we cannot control the amount or timing of resources that they devote to our programs. They may not assign as great a priority to our programs or pursue them as diligently as we would if we were undertaking such activities ourselves. If these investigators or collaborators fail to devote sufficient time and resources to our drug development programs, or if their performance is substandard, the approval of our regulatory submissions and our introductions of new drugs will be delayed or prevented.

Our potential collaborators may also have relationships with other commercial entities, some of which may compete with us. If outside collaborators assist our competitors to our detriment, the approval of our regulatory submissions will be delayed and the sales from our products, if any are commercialized, will be less than expected.

If the third parties on which we rely to conduct our clinical trials and to assist us with pre-clinical development do not perform as contractually required or expected, we may not able to obtain regulatory approval for or commercialize our products.

We do not have the ability to independently conduct all the pre-clinical and clinical trials for our products and we must rely on third parties, such as contract research organizations, medical institutions, clinical investigators and contract laboratories to conduct such trials. If these third parties do not successfully carry out their contractual duties or regulatory obligations or meet expected deadlines, if these third parties need to be replaced, or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our pre-clinical development activities or clinical trials may be extended, delayed, suspended or terminated, and we may not be able to obtain regulatory approval for, or successfully commercialize, our products on a timely basis, if at all, and our business, operating results and prospects may be adversely affected. Furthermore, our third-party clinical trial investigators may be delayed in conducting our clinical trials for reasons outside of their control.

We have no manufacturing capabilities and depend on other parties for our manufacturing operations. If these manufacturers fail to meet our requirements and strict regulatory requirements, our product development and commercialization efforts may be materially harmed.

We currently depend on contract manufacturers. We plan to enter into long-term commercial supply agreements for our product candidates. If any manufacturer is unable to produce required quantities on a timely basis or at all, our operations would be delayed and our business harmed. Our reliance on contract manufacturers exposes us to additional risks, including:

- failure of our future manufacturers to comply with strictly-enforced regulatory requirements;
- failure to manufacture to our specifications, or to deliver sufficient quantities in a timely manner;
- the possibility that we may terminate a contract manufacturer and need to engage a replacement;

- the possibility that our future manufacturers may not be able to manufacture our product candidates and products without infringing the intellectual property rights of others;
- the possibility that our future manufacturers may not have adequate intellectual property rights to provide for exclusivity and prevent competition; and
- insufficiency of intellectual property rights to any improvements in the manufacturing processes or new manufacturing processes for our products.

Any of these factors could result in significant delay or suspension of our clinical trials, regulatory submissions, receipt of required approvals or commercialization of our products and harm our business. If we are not able to secure favorable arrangements with such third parties, our business and financial condition could be harmed.

We must enter into agreements with, and depend upon, one or more partners to assist us in commercializing our product candidates.

Because of our limited financial and other resources, we must actively seek and enter into a collaboration with one or more partners to assist us in our product launch, if marketing approval is granted. Our ability to commercialize does not assume that funds for commercialization of ZYESAMI will be provided by Relief Therapeutics. Those funds are anticipated to come from the $94.2 million Share Subscription Facility committed by GEM (as described elsewhere in this prospectus), from the proceeds of this merger transaction, and from future capital to be raised from investors. However, our ability to commercialize does depend upon continued ability to purchase raw materials from suppliers, our ability to arrange manufacture at contract manufacturers, our ability to deploy commercial sales force via third party partnerships, and our ability to manage shipping and logistics. Any collaboration agreement we enter into may contain unfavorable terms, for example, with respect to product candidates covered, control over decisions and responsibilities, termination rights, payment, and other significant terms.

Our ability to receive any significant revenue from our product candidates covered by the collaboration agreement will be dependent on the efforts of our collaboration partner and may result in lower levels of income to us than if we marketed our product candidates entirely on our own. The collaboration partner may not fulfil its obligations or commercialize our product candidates as quickly as we would like. Even if the collaboration partner performs well, there is no assurance that our proposed products will achieve acceptance by patients, health care providers and insurance companies.

We could also become involved in disputes with our partner, which could lead to delays in or termination of our commercialization programs and time-consuming and expensive litigation or arbitration. If a collaboration partner terminates or breaches its agreement with us, or otherwise fails to complete its obligations in a timely manner, the chances of successfully developing or commercializing our product candidates would be materially and adversely affected.

Additionally, depending upon the collaboration partner that we choose, other companies that might otherwise be interested in developing products with us could be less inclined to do so because of our relationship with the collaboration partner. If our ability to work with present or future strategic partners or collaborators is adversely affected as a result of our collaboration agreement, our business prospects may be limited and our financial condition may be adversely affected.

Upon commercialization of our products, we may be dependent on third parties to market, distribute and sell our products. If we are not successful in contracting with third parties for these services on favorable terms, or at all, our product revenues could be disappointing.

We have no experience selling, marketing or distributing products and no internal capability to do so. In order to commercialize our products, if any are approved by the FDA, we will either have to develop such capabilities internally or collaborate with third parties who can perform these services for us. If we decide to commercialize any of our drugs ourselves, we may not be able to hire the necessary experienced personnel and build sales, marketing and distribution operations which are capable of successfully launching new drugs and generating sufficient product revenues. In addition, establishing such operations will take time and involve significant expense.

If we decide to enter into new co-promotion or other licensing arrangements with third parties, we may be unable to locate acceptable collaborators because the number of potential collaborators is limited and because of competition from others for similar alliances with potential collaborators. Even if we are able to identify one or more acceptable new collaborators, we may not be able to enter into any collaborative arrangements on favorable terms, or at all.

In addition, any revenues we receive would depend upon our collaborators' efforts which may not be adequate due to lack of attention or resource commitments, management turnover, change of strategic focus, business combinations or other factors outside of our control. Depending upon the terms of our collaboration, the remedies we have against an under-performing collaborator may be limited. If we were to terminate the relationship, it may be difficult or impossible to find a replacement collaborator on acceptable terms, or at all.

Risks Related to Ownership of Our Common Stock

Our issuance of additional shares of Common Stock or convertible securities could make it difficult for another company to acquire us, may dilute your ownership of us and could adversely affect our stock price.

We intend to file a registration statement with the SEC on FormS-8 providing for the registration of shares of our Common Stock issued or reserved for issuance under the NRX Pharmaceuticals Inc. 2021 Omnibus Incentive Plan (the "Incentive Plan"). Subject to the satisfaction of vesting conditions and the expiration of lockup agreements, shares registered under the registration statement on Form S-8 will be available for resale immediately in the public market without restriction. From time to time in the future, we may also issue additional shares of our Common Stock or securities convertible into Common Stock pursuant to a variety of transactions, including acquisitions. The issuance by us of additional shares of our Common Stock or securities convertible into our Common Stock would dilute your ownership of us and the sale of a significant amount of such shares in the public market could adversely affect prevailing market prices of our Common Stock.

In the future, we expect to obtain financing or to further increase our capital resources by issuing additional shares of our capital stock or offering debt or other equity securities, including senior or subordinated notes, debt securities convertible into equity, or shares of preferred stock. Issuing additional shares of our capital stock, other equity securities, or securities convertible into equity may dilute the economic and voting rights of our existing stockholders, reduce the market price of our Common Stock, or both. Debt securities convertible into equity could be subject to adjustments in the conversion ratio pursuant to which certain events may increase the number of equity securities issuable upon conversion. Preferred stock, if issued, could have a preference with respect to liquidating distributions or a preference with respect to dividend payments that could limit our ability to pay dividends to the holders of our Common Stock. Our decision to issue securities in any future offering will depend on market conditions and other factors beyond our control, which may adversely affect the amount, timing or nature of our future offerings. As a result, holders of our common stock bear the risk that our future offerings may reduce the market price of our Common Stock and dilute their percentage ownership. See "*Description of Capital Stock*."

The issuance of earnout shares would increase the number of shares eligible for future resale in the public market and result in dilution to our stockholders.

Upon satisfaction of certain triggering events, an aggregate of 25,000,000 shares of our Common Stock may be issued as earnout shares. The earnout threshold is achieved if, prior to December 31, 2022, ZYESAMI receives emergency use authorization by the FDA and NRx Pharmaceuticals submits and the FDA files for review an NDA for ZYESAMI. The earnout shares will be issued within five (5) business days of achieving the earnout threshold. To the extent such earnout shares are issued, additional shares of our Common Stock will be issued, which will result in dilution to the holders of our Common Stock and increase the number of shares eligible for resale in the public market. Sales of substantial numbers of such shares in the public market could adversely affect the market price of our Common Stock.

Future sales, or the perception of future sales, of our Common Stock by us or our existing stockholders in the public market could cause the market price for our Common Stock to decline.

The sale of substantial amounts of shares of our Common Stock in the public market, or the perception that such sales could occur, could harm the prevailing market price of shares of our Common Stock. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

In addition, the shares of Common Stock reserved for future issuance under the Incentive Plan will become eligible for sale in the public market once those shares are issued, subject to provisions relating to various vesting agreements, lock-up agreements and, in some cases, limitations on volume and manner of sale applicable to affiliates under Rule 144, as applicable. The number of shares to be reserved for future issuance under the Incentive Plan is 5,373,049. In addition, the Incentive Plan includes an evergreen feature that will allow our board of directors, in its sole discretion, to reserve 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 of directors. We expect to file one or more registration statements on Form S-8 under the Securities Act to register shares of our Common Stock or securities convertible into or exchangeable for shares of our Common Stock issued pursuant to our equity incentive plans. Any such Form S-8 registration statements will automatically become effective upon filing. Accordingly, shares registered under such registration statements will be available for sale in the open market. The initial registration statement on Form S-8 is expected to cover approximately 5.4 million shares of our Common Stock.

Accordingly, our stockholders and the holders of insider shares may sell large amounts of Common Stock or Warrants in the open market or in privately negotiated transactions when permitted, which could have the effect of increasing the volatility in the trading price of the Common Stock or the Warrants or putting significant downward pressure on the price of the Common Stock or the Warrants.

We will also have the ability under the Share Subscription Facility to require GEM to purchase up to approximately $96.2 million (based on an exchange rate of HKD$7.7592 to USD$1 as of June 9, 2021) of shares of Common Stock at a 10% discount to our market trading price.

Downward pressure on the market price of the Common Stock or the Warrants likely will result from sales of Common Stock issued in connection with the exercise of Warrants or the GEM Warrant, or sales of Common Stock to GEM pursuant to the Share Subscription Facility. Further, sales of Common Stock or Warrants upon expiration of any applicable lockup periods could encourage short sales of Common Stock or the Warrants by market participants. Generally, short selling means selling a security, contract or commodity not owned by the seller. The seller is committed to eventually purchase the financial instrument previously sold. Short sales are used to capitalize on an expected decline in the security's price. Short sales of Common Stock or Warrants could have a tendency to depress the price of the Common Stock or the Warrants, respectively, which could increase the potential for short sales.

We cannot predict the size of future issuances of Common Stock or Warrants or the effect, if any, that future issuances and sales of shares of Common Stock or Warrants will have on the market price of the Common Stock or the Warrants. Sales of substantial amounts of Common Stock, or the perception that such sales could occur, may adversely affect prevailing market prices of Common Stock or Warrants.

We qualify as an "emerging growth company" as well as a "smaller reporting company" within the meaning of the Securities Act, and if we take advantage of certain exemptions from disclosure requirements available to emerging growth companies or smaller reporting companies, it could make our securities less attractive to investors and may make it more difficult to compare our performance to the performance of other public companies.

We qualify as an "emerging growth company" as defined in Section 2(a)(19) of the Securities Act, as modified by the JOBS Act. As such, we will be eligible for and intend to take advantage of certain exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies for as long as it continues to be an emerging growth company, including (a) the exemption from the auditor attestation requirements with respect to internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act, (b) the exemptions from say-on-pay, say-on-frequency and say-on-golden parachute voting requirements and (c) reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements. We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year in which the market value of our Common Stock that is held by non-affiliates exceeds $700 million as of June 30 of that fiscal year, (ii) the last day of the fiscal year in which we have total annual gross revenue of $1.07 billion or more during such fiscal year (as indexed for inflation), (iii) the date on which we have issued more than $1 billion in non-convertible debt in the prior three-year period or (iv) the last day of the fiscal year following the fifth anniversary of the date of the first sale of Common Stock in the BRPA IPO. In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the exemption from complying with new or revised accounting standards provided in Section 7(a)(2)(B) of the Securities Act as long as we are an emerging growth company. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have elected not to opt out of such extended transition period and, therefore, we may not be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. Investors may find Common Stock less attractive because we will rely on these exemptions, which may result in a less active trading market for the Common Stock and its price may be more volatile.

Additionally, we will qualify as a "smaller reporting company" as defined in Item 10(f)(1) of RegulationS-K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two years of audited financial statements. We will remain a smaller reporting company until the last day of the fiscal year in which (i) the market value of our common stock held by non-affiliates exceeds $250 million as of the end of that year's second fiscal quarter, or (ii) our annual revenues exceeded $100 million during such completed fiscal year and the market value of our common stock held by non-affiliates exceeds $700 million as of the end of that year's second fiscal quarter. To the extent we take advantage of such reduced disclosure obligations, it may also make comparison of its financial statements with other public companies difficult or impossible.

Anti-takeover provisions in our governing documents and under Delaware law could make an acquisition of us more difficult, limit attempts by our stockholders to replace or remove our current management and limit the market price of our Common Stock.

The Charter, the Bylaws and Delaware law contain provisions that could have the effect of rendering more difficult, delaying, or preventing an acquisition deemed undesirable by our board of directors. Among other things, the Charter and/or the Bylaws include the following provisions:

- a staggered board, which means that our board of directors is classified into three classes of directors with staggered three-year terms and directors are only able to be removed from office for cause;
- limitations on convening special stockholder meetings, which could make it difficult for our stockholders to adopt desired governance changes;
- a prohibition on stockholder action by written consent, which means that our stockholders will only be able to take action at a meeting of stockholders and will not be able to take action by written consent for any matter from and after the first date on which Jonathan Javitt and Daniel Javitt cease to beneficially own more than fifty percent (50%) of the outstanding shares of Common Stock;
- a forum selection clause, which means certain litigation against us can only be brought in Delaware;
- the authorization of undesignated preferred stock, the terms of which may be established and shares of which may be issued without further action by our stockholders; and
- advance notice procedures, which apply for stockholders to nominate candidates for election as directors or to bring matters before an annual meeting of stockholders.

These provisions, alone or together, could delay or prevent hostile takeovers and changes in control or changes in our management. We have elected in the Charter not to be subject to Section 203 of the DGCL, which prevents interested stockholders, such as certain stockholders holding more than 15% of our outstanding Common Stock, from engaging in certain business combinations unless (i) prior to the time such stockholder became an interested stockholder, the board of directors approved the transaction that resulted in such stockholder becoming an interested stockholder, (ii) upon consummation of the transaction that resulted in such stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the common stock, or (iii) following board approval, such business combination receives the approval of the holders of at least two-thirds of our outstanding common stock not held by such interested stockholder at an annual or special meeting of stockholders. However, the Charter contains provisions that have the same effect as Section 203 of the DGCL, except they provide that Jonathan Javitt and Daniel Javitt and their respective affiliates will not be deemed to be "interested stockholders" regardless of the percentage of Common Stock owned by them and, accordingly, will not be subject to such restrictions.

Any provision of the Charter, the Bylaws or Delaware law that has the effect of delaying, preventing or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our Common Stock and could also affect the price that some investors are willing to pay for our Common Stock.

The Charter and the Bylaws provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees.

The Charter and the Bylaws provide that, unless we consent in writing to the selection of an alternative forum, the (a) Court of Chancery (the "Chancery Court") of the State of Delaware (or, in the event that the Chancery Court does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for: (i) any derivative action, suit or proceeding brought on our behalf; (ii) any action, suit or proceeding asserting a claim of breach of fiduciary duty owed by any of our directors, officers, or stockholders to us or to our stockholders; (iii) any action, suit or proceeding asserting a claim arising pursuant to the DGCL, the Charter or the Bylaws; or (iv) any action, suit or proceeding asserting a claim governed by the internal affairs doctrine; and (b) subject to the foregoing, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Notwithstanding the foregoing, such forum selection provisions shall not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts of the United States have exclusive jurisdiction. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage such lawsuits against us and our directors, officers, and other employees. Alternatively, if a court were to find the choice of forum provision contained in the Charter to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations, and financial condition.

Additionally, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. As noted above, the Charter and the Bylaws will provide that the federal district courts of the United States of America shall have jurisdiction over any action arising under the Securities Act. Accordingly, there is uncertainty as to whether a court would enforce such provision. Our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

Certain of our stockholders will control NRx Pharmaceuticals, and their interests may conflict with NRx Pharmaceuticals' or yours in the future.

Jonathan Javitt and Daniel Javitt beneficially own approximately 31.22% and 29.44% of the outstanding shares of Common Stock, respectively. For so long as Jonathan Javitt and Daniel Javitt continue to own a significant percentage of Common Stock, Jonathan Javitt and Daniel Javitt will still be able to significantly influence the composition of our board of directors and the approval of actions requiring stockholder approval. Accordingly, for such period of time, Jonathan Javitt and Daniel Javitt will have significant influence with respect to our

management, business plans and policies. In particular, for so long as Jonathan Javitt and Daniel Javitt continue to own a significant percentage of Common Stock, Jonathan Javitt and Daniel Javitt will be able to cause or prevent a change of control of NRx Pharmaceuticals or a change in the composition of our board of directors and could preclude any unsolicited acquisition of NRx Pharmaceuticals. The concentration of ownership could deprive you of an opportunity to receive a premium for your shares of Common Stock as part of a sale of NRx Pharmaceuticals and ultimately might affect the market price of Common Stock. In addition, Jonathan Javitt and Daniel Javitt may have an interest in pursuing acquisitions, divestitures and other transactions that, in its judgment, could enhance its investment, even though such transactions might involve risks to you. For example, Jonathan Javitt and Daniel Javitt could cause us to make acquisitions that increase our indebtedness or cause us to sell revenue-generating assets. In certain circumstances, acquisitions of debt at a discount by purchasers that are related to a debtor can give rise to cancellation of indebtedness income to such debtor for U.S. federal income tax purposes. So long as Jonathan Javitt and Daniel Javitt continue to own a significant amount of our combined voting power, even if such amount is less than 50%, Jonathan Javitt and Daniel Javitt will continue to be able to strongly influence or effectively control our decisions.

Notwithstanding Jonathan Javitt's and Daniel Javitt's control of or substantial influence over NRx Pharmaceuticals, we may from time to time enter into transactions with Jonathan Javitt and Daniel Javitt and their respective affiliates, or enter into transactions in which Jonathan Javitt and Daniel Javitt or their respective affiliates otherwise have a direct or indirect material interest. We have adopted a formal written policy for the review and approval of transactions with related persons. A description of the policy we adopted with respect to the approval or ratification of transactions in which related persons, such as Jonathan Javitt and Daniel Javitt and their respective affiliates, have a direct or indirect material interest is included in this prospectus. For more information, see "*Certain Relationships and Related Party Transactions*."

Our Charter will not prevent Jonathan Javitt and Daniel Javitt and their respective affiliates from engaging in business activities which compete with us or otherwise conflict with our interests.

Although Jonathan Javitt and Daniel Javitt are precluded from engaging, directly or indirectly, in the same business activities or similar business activities or lines of business in which our operates based on Jonathan Javitt's employment contract with us and the Glytech DLA (as defined below), respectively, our Charter provides that none of Jonathan Javitt and Daniel Javitt or their respective affiliates will have any duty to refrain from engaging, directly or indirectly, in the same business activities or similar business activities or lines of business in which NRx Pharmaceuticals operates. The Stockholder Parties also may pursue corporate opportunities that may be complementary to our business and, as a result, those corporate opportunities may not be available to us.

We will be a "controlled company" within the meaning of the rules of Nasdaq and the rules of the SEC. As a result, we will qualify for, and intend to rely on, exemptions from certain corporate governance requirements that would otherwise provide protection to stockholders of other companies.

Jonathan Javitt and Daniel Javitt control a majority of the voting power of the Common Stock. As a result, NRx Pharmaceuticals is a "controlled company" within the meaning of the corporate governance standards of Nasdaq. Under these rules, a company of which more than 50% of the voting power is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain corporate governance requirements, including:

- the requirement that a majority of our board of directors consist of "independent directors" as defined under the rules of Nasdaq;
- the requirement that we have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities;
- the requirement that we have a nominating and corporate governance committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and

- the requirement for an annual performance evaluation of the compensation and nominating and corporate governance committees.

We intend to utilize some or all of these exemptions. As a result, our nominating and corporate governance committee and compensation committee may not consist entirely of independent directors and such committees will not be subject to annual performance evaluations. Accordingly, you may not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance requirements of Nasdaq.

In addition, on June 20, 2012, the SEC passed final rules implementing provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 pertaining to compensation committee independence and the role and disclosure of compensation consultants and other advisers to the compensation committee. The SEC's rules direct each of the national securities exchanges to develop listing standards requiring, among other things, that:

- compensation committees be composed of fully independent directors, as determined pursuant to new independence requirements;
- compensation committees be explicitly charged with hiring and overseeing compensation consultants, legal counsel and other committee advisors; and
- compensation committees be required to consider, when engaging compensation consultants, legal counsel or other advisors, certain independence factors, including factors that examine the relationship between the consultant or advisor's employer and NRx Pharmaceuticals.

As a "controlled company", we will not be subject to these compensation committee independence requirements.

General Risk Factors

Our Common Stock price may be volatile or may decline regardless of our operating performance. You may lose some or all of your investment.

The trading price of our Common Stock is likely to be volatile. The stock market recently has experienced extreme volatility. This volatility often has been unrelated or disproportionate to the operating performance of particular companies. You may not be able to resell your shares at an attractive price due to a number of factors such as those listed in "*—Risks Related to Our Business and Industry*" and the following:

- the impact of the COVID-19 pandemic on our financial condition and the results of operations;
- our operating and financial performance and prospects;
- our quarterly or annual earnings or those of other companies in our industry compared to market expectations;
- conditions that impact demand for our products;
- future announcements concerning our business, our product users' businesses or our competitors' businesses;
- the public's reaction to our press releases, other public announcements and filings with the SEC;
- the market's reaction to our reduced disclosure and other requirements as a result of being an "emerging growth company" under the JOBS Act and a "controlled company" under the rules of Nasdaq;

- the size of our public float;
- coverage by or changes in financial estimates by securities analysts or failure to meet their expectations;
- market and industry perception of our success, or lack thereof, in pursuing our growth strategy;
- strategic actions by us or our competitors, such as acquisitions or restructurings;
- changes in laws or regulations which adversely affect our industry or us;
- changes in accounting standards, policies, guidance, interpretations or principles;
- changes in senior management or key personnel;
- issuances, exchanges or sales, or expected issuances, exchanges or sales of our capital stock;
- changes in our dividend policy;
- adverse resolution of new or pending litigation against us; and
- changes in general market, economic and political conditions in the United States and global economies or financial markets, including those resulting from natural disasters, terrorist attacks, acts of war and responses to such events.

These broad market and industry factors may materially reduce the market price of our Common Stock, regardless of our operating performance. In addition, price volatility may be greater if the public float and trading volume of our Common Stock is low. As a result, you may suffer a loss on your investment.

In the past, following periods of market volatility, stockholders have instituted securities class action litigation. If we were involved in securities litigation, it could have a substantial cost and divert resources and the attention of executive management from our business regardless of the outcome of such litigation.

If securities analysts do not publish research or reports about us, or if they issue unfavorable commentary about us or our industry or downgrade our Common Stock, the price of our Common Stock could decline.

The trading market for our Common Stock will depend in part on the research and reports that third-party securities analysts publish about us and the industries in which we operate. We may be unable or slow to attract research coverage and if one or more analysts cease coverage of us, the price and trading volume of our securities would likely be negatively impacted. If any of the analysts that may cover us change their recommendation regarding our securities adversely, or provide more favorable relative recommendations about our competitors, the price of our securities would likely decline. If any analyst that may cover us ceases covering us or fails to regularly publish reports on us, we could lose visibility in the financial markets, which could cause the price or trading volume of our securities to decline. Moreover, if one or more of the analysts who cover us downgrades our common stock, or if our reporting results do not meet their expectations, the market price of our Common Stock could decline.

The obligations associated with being a public company will involve significant expenses and will require significant resources and management attention, which may divert from our business operations.

As a public company, we are subject to the reporting requirements of the Exchange Act and the Sarbanes-Oxley Act. The Exchange Act requires that we file annual, quarterly and current reports with respect to our business and financial condition. The Sarbanes-Oxley Act requires, among other things, that we establish and maintain effective internal control over financial reporting. As a result, we will incur significant legal, accounting and other expenses that we did not previously incur. Our entire management team and many of our other employees will need to devote substantial time to compliance and may not effectively or efficiently manage our transition into a public company.

In addition, the need to establish the corporate infrastructure demanded of a public company may also divert management's attention from implementing our business strategy, which could prevent us from improving our business, results of operations and financial condition. We have made, and will continue to make, changes to our internal control over financial reporting, including IT controls, and procedures for financial reporting and accounting systems to meet our reporting obligations as a public company. However, the measures we take may not be sufficient to satisfy our obligations as a public company. If we do not continue to develop and implement the right processes and tools to manage our changing enterprise and maintain our culture, our ability to compete successfully and achieve our business objectives could be impaired, which could negatively impact our business, financial condition and results of operations. In addition, we cannot predict or estimate the amount of additional costs we may incur to comply with these requirements. We anticipate that these costs will materially increase our general and administrative expenses.

These rules and regulations result in our incurring legal and financial compliance costs and will make some activities more time-consuming and costly. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

As a public reporting company, we are subject to rules and regulations established from time to time by the SEC regarding our internal control over financial reporting. If we fail to establish and maintain effective internal control over financial reporting and disclosure controls and procedures, we may not be able to accurately report our financial results or report them in a timely manner.

As a public reporting company, we are subject to the rules and regulations established from time to time by the SEC and Nasdaq. These rules and regulations require, among other things that we establish and periodically evaluate procedures with respect to our internal control over financial reporting. Reporting obligations as a public company are likely to place a considerable strain on our financial and management systems, processes and controls, as well as on our personnel.

In addition, as a public company, we are required to document and test our internal control over financial reporting pursuant to Section 404 of the Sarbanes-Oxley Act so that our management can certify as to the effectiveness of our internal control over financial reporting. As an emerging growth company, we will not be required to comply with the auditor attestation requirements of Section 4040 of the Sarbanes-Oxley Act. For additional information related to the risks and uncertainties of our compliance with the Sarbanes-Oxley Act, see "*Risk Related to an Early-Stage Company—Failure to achieve and maintain effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act") could impair our ability to produce timely and accurate financial statements or comply with applicable regulations and have a material adverse effect on our business."*

We do not intend to pay dividends on our Common Stock for the foreseeable future.

We currently intend to retain all available funds and any future earnings to fund the development and growth of our business. As a result, we do not anticipate declaring or paying any cash dividends on our Common Stock in the foreseeable future. Any decision to declare and pay dividends in the future will be made at the discretion of our board of directors and will depend on, among other things, our business prospects, results of operations, financial condition, cash requirements and availability, legal requirements, certain restrictions related to our indebtedness, industry trends and other factors that our board of directors may deem relevant. Any such decision will also be subject to compliance with contractual restrictions and covenants in the agreements governing our current and future indebtedness. In addition, we may incur additional indebtedness, the terms of which may further restrict or prevent us from paying dividends on our common stock. As a result, you may have to sell some or all of your common stock after price appreciation in order to generate cash flow from your investment, which you may not be able to do. Our inability or decision not to pay dividends, particularly when others in our industry have elected to do so, could also adversely affect the market price of our Common Stock.

USE OF PROCEEDS

We are filing the registration statement of which this prospectus is a part to permit holders of the shares of our Common Stock described in the section entitled "Selling Securityholders" to resell such shares. We will not receive any proceeds from the sale of shares by the Selling Securityholders.

The Selling Securityholders will pay all incremental selling expenses relating to the sale of their shares, including underwriters' or agents' commissions and discounts, brokerage fees, underwriter marketing costs and all reasonable fees and expenses of any legal counsel representing the Selling Securityholders, except that we will pay the reasonable fees and expenses of one legal counsel for the Selling Securityholders, in the event of an underwritten offering of their shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees, printing and delivery fees, Nasdaq listing fees and fees and expenses of our counsel and our accountants.

We are also registering the issuance of an aggregate of 3,586,250 shares of our Common Stock upon the exercise of outstanding warrants. We will receive the proceeds from any exercise of warrants for cash. We intend to use the proceeds the exercise of warrants for cash for general corporate, funding of clinical trial programs and working capital purposes.

DIVIDEND POLICY

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

MARKET INFORMATION

Our Common Stock and warrants are listed on Nasdaq under the symbols “NRXP” and “NRXPW”, respectively. Prior to the consummation of the Business Combination, our units, Common Stock, rights and warrants were listed on the Nasdaq Capital Market under the symbols “BRPAU”, “BRPA”, “BRPAR” and “BRPAW”, respectively. As of June 9, 2021, the Company had 47,914,531 shares of Common Stock outstanding held of record by 113 holders and no shares of preferred stock outstanding. Such amounts do not include DTC participants or beneficial owners holding shares through nominee names.

SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial information set forth below should be read in conjunction with "*Management's Discussion and Analysis of Financial Condition and Results of Operations*" and the consolidated financial statements of and the related notes thereto included elsewhere in this prospectus.

The statement of operations data for the years ended December 31, 2020 and 2019 and the balance sheet data and statement of cash flow data as of December 31, 2020 and 2019 have been derived from our audited consolidated financial statements included elsewhere in this prospectus.

The statement of operations data for the three months ended March 31, 2021 and 2020 and the balance sheet data and statement of cash flow data as of March 31, 2021 have been derived from our unaudited condensed consolidated financial statements included elsewhere in this prospectus. The unaudited financial data presented have been prepared on a basis consistent with our audited consolidated financial statements. In the opinion of management, such unaudited financial data reflect all adjustments, consisting only of normal and recurring adjustments necessary for a fair presentation of the results for those periods. The results of operations for the interim periods are not necessarily indicative of the results to be expected for the full year or any future period.

	Three Months Ended March 31,		For the Years Ended December 31,	
	2021	2020	2020	2019
	(Unaudited)			
Statement of Operating Data:				
Operating expenses:				
Research and development	$ 2,908,705	$ 604,334	$ 10,625,032	$ 3,495,648
General and administrative	2,101,402	615,653	11,435,658	2,767,590
Settlement expense	21,365,641	—	39,486,139)	—
Reimbursement of expenses from Relief Therapeutics	(771,245)	—	(10,160,421)	—
Total operating expenses	25,604,503	1,219,987	51,386,408	6,263,238
Loss from operations	(25,604,503)	(1,219,987)	$ (51,386,408)	$ (6,263,238)
Other expenses:				
Gain on extinguishment of debt	$ (120,810)	$ —		
Loss on conversion of convertible notes payable	—	306,641	$ 306,641	$ —
Interest expense	5,181	36,268	56,695	303,057
Change in fair value of embedded put	—	27,160	27,160	162,866
Total other expenses	(115,629)	370,069	(390,496)	(465,923)
Loss before tax	(25,488,874)	(1,590,056)	(51,776,904)	(6,729,161)
Tax expense	—	—	—	—
Net loss	(25,488,874)	(1,590,056)	(51,776,904)	(6,729,161)
Balance Sheet Data:				
Cash and cash equivalents	$ 13,271,579		$ 1,858,513	$ 877,421
Total assets	13,572,107		2,941,169	985,936
Total liabilities	7,189,099		46,719,641	5,836,886
Total stockholders' deficit	6,383,008		(43,778,472)	(4,850,950)
Statement of Cash Flow Data:				
Net cash used in operating activities	$ (3,013,810)	$ (832,657)	$ (2,266,367)	$ (5,542,325)
Net cash used in investing activities	$ —	$ —	$ (1,501)	$ (3,552)
Net cash provided by financing activities	$ 14,426,876	$ 226,994	$ 3,248,960	$ 5,802,002

UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

Defined terms included below shall have the same meaning as terms defined and included elsewhere in this proxy statement / prospectus / consent solicitation statement.

Introduction

The Company is providing the following unaudited pro forma condensed combined financial information to aid you in your analysis of the financial aspects of the Business Combination.

The following unaudited pro forma condensed combined financial information has been prepared in accordance with Article 11 of Regulation S-X as amended by the final rule, Release No. 33-10786 "Amendments to Financial Disclosures about Acquired and Disposed Businesses." Defined terms included below have the same meaning as terms defined and included elsewhere in this proxy statement/prospectus.

Prior to the Business Combination, BRPA was a blank check company incorporated in Delaware on September 18, 2017. BRPA was formed for the purpose of acquiring, through a merger, share exchange, asset acquisition, stock purchase, reorganization, recapitalization, or other similar business transaction, one or more operating businesses or entities. At March 31, 2021, BRPA had $5,968,035 in its trust account.

NeuroRx, together with its wholly owned subsidiary, NeuroRx 2015 LTD (Israel), is a clinical-stage small molecule pharmaceutical company which develops novel therapeutics for the treatment of central nervous system disorders and life-threatening pulmonary diseases.

The unaudited pro forma condensed combined balance sheet as of March 31, 2021 combines the historical balance sheet of BRPA and the historical balance sheet of NeuroRx on a pro forma basis as if the Business Combination and the related transactions contemplated by the Merger Agreement, summarized below, had been consummated on March 31, 2021. The unaudited pro forma condensed combined statements of operations for the three months ended March 31, 2021 and for the year ended December 31, 2020, combines the historical statements of operations of BRPA and NeuroRx for such periods on a pro forma basis as if the Business Combination and the transactions contemplated by the Merger Agreement, summarized below, had been consummated on January 1, 2020, the beginning of the earliest period presented.

The pro forma condensed combined financial information may not be useful in predicting the future financial condition and results of operations of NRX Pharmaceuticals. The actual financial position and results of operations may differ significantly from the pro forma amounts reflected herein due to a variety of factors.

The historical financial information of BRPA was derived from the unaudited and audited financial statements of BRPA as of and for the three months ended March 31, 2021, and for the year ended December 31, 2020, which are included elsewhere in this prospectus. The historical financial information of NeuroRx was derived from the unaudited and audited consolidated financial statements of NeuroRx as of and for the three months ended March 31, 2021, and fo the year ended December 31, 2020, which are included elsewhere in this prospectus. This information should be read together with BRPA's and NeuroRx's unaudited and audited financial statements and related notes, and other financial information included elsewhere in this prospectus.

Accounting for the Transactions

The Business Combination was accounted for as a reverse recapitalization, in accordance with GAAP. Under this method of accounting, BRPA will be treated as the "acquired" company for financial reporting purposes. Accordingly, the Business Combination will be treated as the equivalent of NeuroRx issuing stock for the net assets of BRPA, accompanied by a recapitalization. The net assets of BRPA will be stated at historical cost, with no goodwill or other intangible assets recorded.

NeuroRx has been determined to be the accounting acquirer based on evaluation of the following facts and circumstances:

- NeuroRx has the largest single voting interest block in NRX Pharmaceuticals;
- NeuroRx has the ability to nominate the majority of the members of the board of directors of NRX Pharmaceuticals following the closing;
- NeuroRx holds executive management roles for NRX Pharmaceuticals and be responsible for the day-to-day operations of NRX Pharmaceuticals; and
- The intended strategy of NRX Pharmaceuticals continues NeuroRx's current strategy of development of drug candidates.

Description of the Business Combination

Upon the closing of the Business Combination, BRPA assumed the name "NRX Pharmaceuticals, Inc." The aggregate consideration for the Business Combination was approximately $500,000,000 paid in the form of shares of the BRPA Common Stock.

Shares transferred at closing (1)(2)	50,000,000
Value per share (3)	$ 10.00
Total share consideration (1)(4)	$500,000,000

(1) Amount excludes the issuance of 25,000,000 earn-out shares to certain shareholders of NeuroRx as a result of NRX Pharmaceuticals satisfying the performance conditions subsequent to closing of the Merger.
(2) Amount includes 5,126,148 shares reserved related to replacement warrants and options.
(3) Share consideration is calculated using a $10.00 reference price.
(4) Amount excludes cash payments totaling $100,000,000 related to earn-out milestones as a result of NRX Pharmaceuticals satisfying the performance conditions subsequent to closing of the Merger.

Subject to certain conditions, an aggregate of 25,000,000 additional shares of Common Stock will be issued to NeuroRx pre-merger equity holders if, prior to December 31, 2022, (1) the NeuroRx COVID-19 Drug receives emergency use authorization by the FDA and (2) the FDA accepts NeuroRx's filing of its application to approve the NeuroRx COVID-19 Drug. In addition, subject to certain conditions, a $100,000,000 cash earn-out may be payable to NeuroRx pre-merger equity holders if, prior to December 31, 2022, either (1) FDA approval of the NeuroRx COVID-19 Drug is obtained and the NeuroRx COVID-19 Drug is listed in the FDA's "Orange Book" or (2) FDA approval of the NeuroRx Antidepressant Drug Regimen is obtained and the NeuroRx Antidepressant Drug Regimen is listed in the FDA's "Orange Book."

NeuroRx continues to review the accounting and financial impact as a result of the Business Combination including the estimation of the fair value of the contingent consideration discussed above, the amounts of which are currently not included in the unaudited pro forma condensed combined financial information. The impact of such contingent consideration will affect earnings and could have a material effect on the unaudited pro forma condensed combined financial information.

The following summarizes the pro forma Common Stock outstanding based on the actual redemption of 216 BRPA Public Shares for aggregate redemption payments of $2,333 following the consummation of the Business Combination:

	Shares	%
NeuroRx Shareholders	44,873,852	92.3%
Total NeuroRx Merger Shares	44,873,852	92.3%
BRPA Public Shares	1,242,196	2.6%
BRPA Founder and Private Shares	1,487,534	3.1%
Total BRPA Shares	2,729,730	5.6%
PIPE investors	1,000,000	2.1%
Pro forma Common Stock at March 31, 2021	**48,603,582**	**100.0%**

The two tables above exclude shares reserved for NeuroRx's outstanding warrants and option awards. Pursuant to the Merger Agreement, outstanding warrants were canceled and such agreements terminated pursuant to the issuance of replacement warrants by BRPA. Further, pursuant to the Merger Agreement, outstanding options were canceled and such agreements terminated pursuant to the issuance of replacement options by BRPA. Replacement options are subject to the same vesting schedule and forfeiture restrictions as the unvested NeuroRx options.

The following unaudited pro forma condensed combined balance sheet as of March 31, 2021 and the unaudited pro forma condensed combined statements of operations for the three months ended March 31, 2021 and for the year ended December 31, 2020 are based on the historical financial statements of BRPA and NeuroRx. The unaudited pro forma adjustments are based on information currently available, and assumptions and estimates underlying the unaudited pro forma adjustments are described in the accompanying notes. Actual results may differ materially from the assumptions used to present the accompanying unaudited pro forma condensed combined financial information.

UNAUDITED PRO FORMA CONDENSED COMBINED BALANCE SHEET
AS OF MARCH 31, 2021

	BRPA (Historical)	NeuroRx (Historical)	Transaction Accounting Adjustments		Pro Forma Combined
ASSETS					
Current assets:					
Cash and cash equivalents	$ 232	$ 13,271,579	$ 5,968,035	A	$ 24,505,323
			10,000,000	B	
			(1,883,608)	C	
			(2,850,699)	E	
			(216)	J	
Accounts receivable	—	—	—		—
Prepaid expenses and other current assets	59,492	290,090	—		349,582
Total current assets	59,724	13,561,669	11,233,512		24,854,905
Cash and marketable securities held in Trust Account	5,968,035	—	(5,968,035)	A	—
Other assets	—	10,438	—		10,438
Total assets	**$ 6,027,759**	**$ 13,572,107**	**$ 5,265,477**		**$ 24,865,343**
LIABILITIES AND STOCKHOLDERS EQUITY (DEFICIT)					
Current liabilities:					
Accounts payable	$ 643,693	$ 4,382,711	$ —		$ 5,026,404
Accrued settlement expense	—	—	—		—
Accrued clinical site costs	—	956,833	—		956,833
Accrued and other current liabilities	—	1,160,907	—		1,160,907
Dividends payable	—	7,589	(7,589)	H	—
Warrant liability	1,313,324	—	—		1,313,324
Notes payable	2,850,699	171,134	(2,850,699)	E	171,134
Total current liabilities	**4,807,716**	**6,679,174**	**(2,858,288)**		**8,628,602**
Notes payable	—	509,925	—		509,925
Total liabilities	**4,807,716**	**7,189,099**	**(2,858,288)**		**9,138,527**
Stockholders' Equity (Deficit)					
Preferred stock	—	2,371	(2,371)	H	—
Common stock	2,688	11,807	1,000	B	53,728
			200	D	
			(875)	F	
			717	G	
			(11,807)	H	
			50,000	H	
			(2)	J	
Additional paid-in capital	2,831,088	122,037,424	9,999,000	B	132,225,290
			(1,000,000)	C	
			(200)	D	
			875	F	
			(717)	G	
			(28,233)	H	
			(1,613,733)	I	
			(214)	J	
Accumulated deficit	(1,613,733)	(115,668,594)	(883,608)	C	(116,552,202)
			1,613,733	I	
Total stockholders' equity (deficit)	**1,220,043**	**6,383,008**	**8,123,765**		**15,726,816**
Total liabilities and stockholders' equity (deficit)	**$ 6,027,759**	**$ 13,572,107**	**$ 5,265,477**		**$ 24,865,343**

UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF OPERATIONS
FOR THE THREE MONTHS ENDED MARCH 31, 2021

	BRPA (Historical)	NeuroRx (Historical)	Transaction Accounting Adjustments		Pro Forma Combined
Operating expenses:					
Research and development	$ —	$ 2,908,705	$ (27,664)	AA	$ 3,112,272
			231,231	AA	
General and administrative	235,580	2,101,402	(344,034)	AA	2,270,299
			277,351	AA	
Settlement expense	—	21,365,641	—		21,365,641
Reimbursement of expenses from Relief Therapeutics	—	(771,245)	—		(771,245)
Total operating expenses	235,580	25,604,503	136,884		25,976,967
Loss from operations	(235,580)	(25,604,503)	(136,884)		(25,976,967)
Other income (expenses):					
Interest income	88	—	(88)	CC	—
Interest expense	—	(5,181)	—		(5,181)
Gain on extinguishment of debt	—	120,810	—		120,810
Change in fair value of warrant liability	(658,226)	—	—		(658,226)
Other income (expense)	(658,138)	115,629	(88)		(542,597)
Loss before income taxes	(893,718)	(25,488,874)	(136,972)		(26,519,564)
Provision for income taxes	—	—	—		—
Net loss	**$ (893,718)**	**$(25,488,874)**	**$ (136,972)**		**$(26,519,564)**
Net Loss per Share (Note 4):					
Basic and diluted weighted average shares outstanding, Common stock subject to possible redemption	—				
Basic and diluted net loss per share, Common stock subject to possible redemption	$ —				
Basic and diluted weighted average shares outstanding, Non-redeemable common stock	2,688,242	11,284,247			48,603,582
Basic and diluted net loss per share, Non-redeemable common stock	$ (0.33)	$ (2.26)			$ (0.55)

UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF OPERATIONS
FOR THE YEAR ENDED DECEMBER 31, 2020

	BRPA (Historical as Restated)	NeuroRx (Historical)	Transaction Accounting Adjustments		Pro Forma Combined
Operating expenses:					
Research and development	$ —	$ 10,625,032	$ (398,340)	AA	$ 11,151,615
			924,923	AA	
General and administrative	907,406	11,435,658	(332,065)	AA	14,004,016
			1,109,409	AA	
			883,608	BB	
Settlement expense	—	39,486,139	—		39,486,139
Reimbursement of expenses from Relief Therapeutics	—	(10,160,421)	—		(10,160,421)
Total operating expenses	907,406	51,386,408	2,187,535		54,481,349
Loss from operations	(907,406)	(51,386,408)	(2,187,535)		(54,481,349)
Other income (expenses):					
Forgiveness of debt	352,071	—	—		352,071
Interest income	138,764	—	(138,764)	CC	—
Interest expense	—	(56,695)	—		(56,695)
Change in fair value of warrant liability	(655,098)	—	—		(655,098)
Change in fair value of embedded put	—	(27,160)	—		(27,160)
Loss on conversion	—	(306,641)	—		(306,641)
Other income (expense)	(164,263)	(390,496)	(138,764)		(693,523)
Loss before income taxes	(1,071,669)	(51,776,904)	(2,326,299)		(55,174,872)
Provision for income taxes	(17,841)	—	—		(17,841)
Net loss	**$(1,089,510)**	**$(51,776,904)**	**$(2,326,299)**		**$(55,192,713)**
Net Loss per Share (Note 4):					
Basic and diluted weighted average shares outstanding, Common stock subject to possible redemption	546,586				
Basic and diluted net loss per share, Common stock subject to possible redemption	$ —				
Basic and diluted weighted average shares outstanding, Non-redeemable common stock	2,736,258	10,845,240			48,603,582
Basic and diluted net loss per share, Non-redeemable common stock	$ (0.40)	$ (4.77)			$ (1.14)

NOTES TO UNAUDITED PRO FORMA COMBINED FINANCIAL INFORMATION

1. Basis of Presentation

The Business Combination will be accounted for as a reverse recapitalization in accordance with GAAP. Under this method of accounting, BRPA will be treated as the "acquired" company for financial reporting purposes. Accordingly, the Business Combination will be treated as the equivalent of NeuroRx issuing stock for the net assets of BRPA, accompanied by a recapitalization. The net assets of BRPA will be stated at historical cost, with no goodwill or other intangible assets recorded. Operations prior to the Business Combination will be those of NeuroRx.

The unaudited pro forma condensed combined balance sheet as of March 31, 2021 assumes that the Business Combination occurred on March 31, 2021. The unaudited pro forma condensed combined statements of operations for the three months ended March 31, 2021 and for the year ended December 31, 2020 gives pro forma effect to the Business Combination as if it had been completed on January 1, 2020. These periods are presented on the basis of NeuroRx as the accounting acquirer.

The unaudited pro forma condensed combined balance sheet as of March 31, 2021 has been prepared using, and should be read in conjunction with, the following:

- BRPA's unaudited balance sheet as of March 31, 2021 and the related notes for the period ended March 31, 2021, included elsewhere in this prospectus;
- NeuroRx's unaudited balance sheet as of March 31, 2021 and the related notes for the period ended March 31, 2021, included elsewhere in this prospectus.

The unaudited pro forma condensed combined statement of operations for the three months ended March 31, 2021 has been prepared using, and should be read in conjunction with, the following:

- BRPA's unaudited statement of operations for the three months ended March 31, 2021 and the related notes, included elsewhere in this prospectus; and
- NeuroRx's unaudited statement of operations for the three months ended March 31, 2021 and the related notes, included elsewhere in this prospectus.

The unaudited pro forma condensed combined statement of operations for the year ended December 31, 2020 has been prepared using, and should be read in conjunction with, the following:

- BRPA's audited statement of operations for the year ended December 31, 2020 and the related notes, included elsewhere in this prospectus; and
- NeuroRx's audited statement of operations for the year ended December 31, 2020 and the related notes, included elsewhere in this prospectus.

The unaudited pro forma condensed combined financial information does not give effect to any anticipated synergies, operating efficiencies, tax savings, or cost savings that may be associated with the Business Combination.

The pro forma adjustments reflecting the consummation of the Business Combination are based on certain currently available information and certain assumptions and methodologies that we believe are reasonable under the circumstances. The unaudited condensed combined pro forma adjustments, which are described in the accompanying notes, may be revised as additional information becomes available and is evaluated. Therefore, it is likely that the actual adjustments will differ from the pro forma adjustments and it is possible the difference may be material. We believe that its assumptions and methodologies provide a reasonable basis for presenting all of the significant effects of the Business Combination based on information available to management at this time and that the pro forma adjustments give appropriate effect to those assumptions and are properly applied in the unaudited pro forma condensed combined financial information.

NOTES TO UNAUDITED PRO FORMA COMBINED FINANCIAL INFORMATION

The unaudited pro forma condensed combined financial information is not necessarily indicative of what the actual results of operations and financial position would have been had the Business Combination taken place on the dates indicated, nor are they indicative of the future consolidated results of operations or financial position of NRX Pharmaceuticals. The unaudited pro forma condensed combined financial information should be read in conjunction with the historical financial statements and notes thereto of BRPA and NeuroRx.

2. Accounting Policies

Upon consummation of the Business Combination, NRX Pharmaceuticals will perform a comprehensive review of the two entities' accounting policies. As a result of the review, management may identify differences between the accounting policies of the two entities which, when conformed, could have a material impact on the financial statements of NRX Pharmaceuticals. Based on its initial analysis, management did not identify any differences that would have a material impact on the unaudited pro forma condensed combined financial information. As a result, the unaudited pro forma condensed combined financial information does not assume any differences in accounting policies.

3. Adjustments to Unaudited Pro Forma Condensed Combined Financial Information

The unaudited pro forma condensed combined financial information has been prepared to illustrate the effect of the Business Combination and has been prepared for informational purposes only.

The following unaudited pro forma condensed combined financial information has been prepared in accordance with Article 11 of Regulation S-X as amended by the final rule, Release No. 33-10786 "Amendments to Financial Disclosures about Acquired and Disposed Businesses." Release No. 33-10786 replaces the existing pro forma adjustment criteria with simplified requirements to depict the accounting for the transaction ("Transaction Accounting Adjustments") and present the reasonably estimable synergies and other transaction effects that have occurred or are reasonably expected to occur ("Management's Adjustments"). The Company has elected not to present Management's Adjustments and will only be presenting Transaction Accounting Adjustments in the following unaudited pro forma condensed combined financial information.

The pro forma condensed combined financial information does not include an income tax adjustment. Upon closing of the Business Combination, it is likely that NRX Pharmaceuticals will record a valuation allowance against the full value of U.S. and state deferred tax assets as the recoverability of the tax assets is uncertain. The pro forma combined provision for income taxes does not necessarily reflect the amounts that would have resulted had NRX Pharmaceuticals filed consolidated income tax returns during the periods presented.

The pro forma basic and diluted loss per share amounts presented in the unaudited pro forma condensed combined statements of operations are based upon the number of NRX Pharmaceuticals' shares outstanding, assuming the Business Combination occurred on January 1, 2020.

Adjustments to Unaudited Pro Forma Condensed Combined Balance Sheet

The adjustments included in the unaudited pro forma condensed combined balance sheet as of March 31, 2021 are as follows:

A. Reflects the reclassification of marketable securities held in the Trust Account at the balance sheet date that becomes available to fund the Business Combination.

B. Represents the net proceeds of $10,000,000 from the private placement of 1,000,000 shares of BRPA Common Stock at $10.00 per share pursuant to certain subscription agreements entered into on March 12, 2021 with certain qualified institutional buyers and institutional accredited investors, none of which are affiliated with BRPA or NeuroRX. The PIPE financing is closed concurrently with, and contingent upon, the consummation of the Business Combination.

C. Represents preliminary estimated transaction costs, inclusive of advisory, banking, printing, legal and accounting fees, that are expensed as part of the Business Combination. The unaudited pro forma condensed combined balance sheet reflects these costs as a reduction of cash. The costs expensed through accumulated deficit are included in the unaudited pro forma condensed combined statement of operations for the year ended December 31, 2020 as discussed below.

NOTES TO UNAUDITED PRO FORMA COMBINED FINANCIAL INFORMATION

D. Represents issuance of 200,000 shares of Common Stock to EBC pursuant to the BCMA Amendment Agreement.

E. Represents repayment of BRPA's outstanding notes payable.

F. Represents forfeiture of 875,216 Founder Shares.

G. Represents issuance of 690,000 and 27,250 shares of BRPA common stock pursuant to outstanding Public and Private Rights, respectively.

H. Represents recapitalization of NeuroRx's outstanding equity and the issuance of 44,873,000 shares of Common Stock to NeuroRx shareholders as consideration for the reverse recapitalization.

I. Reflects the reclassification of BRPA's historical accumulated deficit.

J. Reflects the actual redemption of 216 BRPA Public Shares for aggregate redemption payments of $2,333 allocated to common stock and additional paid-in capital using par value $0.001 per share and a redemption price of $10.80 per share.

Adjustments to Unaudited Pro Forma Condensed Combined Statements of Operations

The pro forma adjustments included in the unaudited pro forma condensed combined statements of operations for the three months ended March 31, 2021 and for the year ended December 31, 2020 are as follows:

AA. Reflects elimination of historical stock-based compensation expense related to canceled NeuroRx option awards and the recognition of postcombination expense related to replacement option awards issued.

BB. Reflects the accrual of additional transaction costs incurred subsequent to March 31, 2021. These costs are in addition to transaction costs incurred by BRPA and NeuroRX previously recognized in the respective historical statement of operations for the three months ended March 31, 2021 and for the year ended December 31, 2020. Additional transaction costs are reflected as if incurred on January 1, 2020, the date the Business Combination occurred for the purposes of the unaudited pro forma condensed combined statement of operations.

CC. Reflects elimination of investment income on the Trust Account.

4. Loss per Share

Represents the net loss per share calculated using the historical weighted average shares outstanding, and the issuance of additional shares in connection with the Business Combination, assuming the shares were outstanding since January 1, 2020. As the Business Combination and related equity transactions are being reflected as if they had occurred at the beginning of the periods presented, the calculation of weighted average shares outstanding for basic and diluted net income (loss) per share assumes that the shares issuable relating to the Business Combination have been outstanding for the entirety of all periods presented.

NOTES TO UNAUDITED PRO FORMA COMBINED FINANCIAL INFORMATION

	For the Three Months Ended March 31, 2021	For the Year Ended December 31, 2020
Pro forma net loss	$(26,519,564)	$ (55,192,713)
Weighted average shares outstanding of common stock	48,603,582	48,603,582
Net loss per share (basic and diluted) (1)	$ (0.55)	$ (1.14)

(1) As the combined company had a net loss on a pro forma combined basis, contingent earnout shares, warrants, and outstanding stock options had no impact to diluted net loss per share as they are considered anti-dilutive.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of financial condition and results of operations together with the consolidated financial statements and the related notes and other financial information of NRx Pharmaceuticals included elsewhere in this prospectus. Some of the information contained in this discussion and analysis contains forward-looking statements that involve risks and uncertainties. As a result of many factors, such as those set forth in the section of the prospectus captioned "Risk Factors" and elsewhere in this prospectus, actual results may differ materially from those anticipated in these forward-looking statements.

Business Overview

NRx Pharmaceuticals is a clinical stage pharmaceutical company that is developing, through its wholly-owned operating subsidiary, NeuroRx, Inc., a Delaware corporation, NRX-101, the first oral therapeutic for the treatment of Acute Suicidal Behavior/Ideation (ASIB) in Bipolar Disorder and ZYESAMI (aviptadil), an intravenous and inhaled drug to treat respiratory failure in COVID-19.

The NRx Antidepressant Drug Regime was developed based upon 30 years of basic science and clinical expertise contributed by Prof. Daniel Javitt, PhD, MD, related to the role of the brain's N-methyl-D-aspartate (NMDA) receptor in regulating human thought processes in general and in regulating depression and suicidality. The NRx Antidepressant Drug Regime begins with a single dose of ketamine, an FDA approved anesthetic, followed by approximately six weeks of daily oral NRX-101. NRX-101 is being developed as a rapid-onset and sustained treatment for acute suicidal crisis associated with bipolar depression. NRX-101 combines DCS, a NMDA receptor modulator, and lurasidone, a 5-HT2a receptor antagonist.

NRX-101 has been awarded Fast Track designation, Breakthrough Therapy designation, and a Special Protocol Agreement by the FDA. Peer-reviewed and published results from multiple Phase II clinical studies demonstrate a significant decline in symptoms of depression and suicidality following administration of DCS. Findings from one of these studies found that bipolar patients who were already receiving a 5-HT2a antagonist demonstrated more than a 50% reduction in symptoms of depression and a 75% reduction in suicidal ideation when ketamine and DCS were added to their treatment regimen. Side effects for patients in a P2a combination study of DCS and 5HT2a included mild sedation, headaches and hypomania. Breakthrough Therapy designation was awarded based on the STABIL-B study (NCT02974010) that demonstrated a statistically significant advantage of NRX-101 vs. lurasidone (the current standard of care) in maintaining remission from depression and suicidality following a single stabilizing dose of ketamine.

In March 2020, we initiated development of RLF-100 (aviptadil acetate) (now reformulated as ZYESAMI) in partnership with Relief Therapeutics. ZYESAMI is based on 50 years of research, pioneered by Professor Sami Said, on the role of Vasoactive Intestinal Peptide in preventing and treating acute lung injury by protecting the Type II cell in the lung. The rights to Dr. Said's scientific work are licensed by us from the Research Foundation of the State University of New York and we expect to cross-license such rights to Relief Therapeutics for use outside US, Canada, and Israel.

In that partnership and pursuant to the Relief Agreement, Relief has committed to fund all costs of formulations and clinical development of the Relief Product for the treatment of COVID-19. The companies agreed that we would lead all development and sales in the United States, Canada, and Israel, with NRx Pharmaceuticals receiving 50% of the profits generated in those territories. Relief is to lead the development and sale of the Relief Product in the rest of the world with NRx Pharmaceuticals receiving 15% of profits in Europe and the United Kingdom, together with 20% of profits in the rest of the world. Relief reimbursed NRx Pharmaceuticals approximately $0.8 million and $10.2 million of costs pursuant to the Relief Agreement for the three months ended March 31, 2021 and the year ended December 31, 2020, respectively.

In an open-label, single center trial at Houston Methodist Hospital, ZYESAMI demonstrated a statistically significant9-fold advantage in probability of survival and recovery from respiratory failure compared to the standard of care among patients with COVID-19 Respiratory Failure.

In February 2021, we reported initial phase IIb/III study results of ZYESAMI in patients with respiratory failure due to critical COVID-19. The study showed that patients who were treated with the maximal standard of care plus ZYESAMI were discharged sooner from the hospital compared to those treated with placebo plus maximal standard of care (SOC). If authorized for use, NRx Pharmaceuticals anticipates that ZYESAMI would be the first drug indicated specifically for COVID-19 patients who are critically ill with respiratory failure.

As of June 9, 2021, Relief has reimbursed us for approximately $10.9 million of expenses, but has not paid approximately $4 million in invoiced costs associated with conduct of the Relief Product clinical trial, reformulation, and manufacture of ZYESAMI. Additionally, as of June 9, 2021, Relief has not funded the costs of the inhaled trial product. We have advised Relief that NRx Pharmaceuticals is funding those costs with other capital.

Recent Developments

BRPA Merger

On May 24, 2021, NeuroRx completed the Business Combination contemplated by the Merger Agreement with BRPA, a special purpose acquisition company and Big Rock Merger Corp. ("Merger Sub"), a wholly-owned subsidiary of BRPA. The terms of the Merger Agreement provided that effective at the time of the Business Combination, Merger Sub merged with and into NeuroRx and NeuroRx survived the merger as our wholly-owned subsidiary. Upon the closing of the Business Combination, BRPA changed its name to NRX Pharmaceuticals, Inc. with its Common Stock continuing to be listed on Nasdaq under the ticker symbol "NRXP" and its warrants continuing to be listed on Nasdaq under the symbol "NRXPW". Cash proceeds of the Business Combination were funded through a combination of BRPA's approximately $6.0 million of cash held in trust, net of redemptions of $2,332.80, and an aggregate of $10.0 million in aggregate gross proceeds to us from the PIPE. Our cash on hand after giving effect to these transactions will be used for general corporate purposes, including funding of clinical trials, advancement of our product development efforts and working capital.

The Business Combination was accounted for as a reverse recapitalization, with no goodwill or other intangible assets recorded, in accordance with GAAP. NeuroRx has been determined to be the accounting acquirer based on evaluation of the following facts and circumstances:

- NeuroRx's shareholders have majority of the voting power in NRx Pharmaceuticals;
- NeuroRx has the ability to appoint a majority of the board of directors of NRx Pharmaceuticals;
- NeuroRx's existing management comprises the management of NRx Pharmaceuticals;
- NeuroRx comprises the ongoing operations of NRx Pharmaceuticals;
- NeuroRx is the larger entity based on business operations; and
- NRx Pharmaceuticals assumed NeuroRx's name.

Under this method of accounting, BRPA is treated as the "acquired" company for financial reporting purposes. Accordingly, for accounting purposes, the Business Combination is treated as the equivalent of NeuroRx issuing stock for the net assets of BRPA, accompanied by a recapitalization, and the historical financial statements of NeuroRx became the historical financial statements of our company upon the closing of the Business Combination.

COVID-19 Outbreak

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency because of a new strain of coronavirus originating in Wuhan, China (the "COVID-19 Outbreak") and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID-19 Outbreak as a pandemic, based on the rapid increase in exposure globally. The full impact of the

COVID-19 Outbreak continues to evolve. As such, NRx Pharmaceuticals cannot estimate the full magnitude, whether positive or negative, that the pandemic will have on our business. If the COVID-19 Outbreak continues, it may have a material adverse effect on our financial condition, liquidity, and future results of operations for the year ending December 31, 2020 and beyond. Management is actively monitoring the impact of the global pandemic on its financial condition, liquidity, operations, industry, and workforce. Alternatively, the COVID-19 Outbreak could have a material positive effect on market demand for the COVID-19 targeted therapeutics currently under development by NRx Pharmaceuticals. Given the daily evolution of theCOVID-19 Outbreak and the global responses to curb its spread, NRx Pharmaceuticals is not able to estimate the effects of the COVID-19 Outbreak on its results of operations, financial condition, or liquidity for the year ending December 31, 2021 and beyond. Aside from our COVID-19 related trials, as a result of the COVID-19 Outbreak, our other trials have been halted.

Components of Results of Operations

Operating expenses

Research and development expenses

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

General and administrative expenses

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

Settlement Expense

Settlement expense consists primarily of settlement expenses related to the GEM Warrant as further discussed under " — Contractual Obligations and Commitments — GEM Share Subscription Facility and Warrant."

Reimbursement of expenses from Relief Therapeutics

Reimbursement of expenses from Relief Therapeutics consists primarily of reimbursable expenses as part of the Relief Agreement.

Results of operations for the three months ended March 31, 2021 and 2020

The following table sets forth our selected statements of operations data for the following periods:

	Three Months Ended March 31,		Change	
	2021	2020	Dollars	Percentage
	(Unaudited)			
Operating expenses:				
Research and development	$ 2,908,705	$ 604,334	$ 2,304,371	381%
General and administrative	2,101,402	615,653	1,485,749	241%
Settlement expense	21,365,641	—	21,365,641	100%
Reimbursement of expenses from Relief Therapeutics	(771,245)	—	(771,245)	(100)%
Total operating expenses	25,604,503	1,219,987	24,384,516	1999%
Loss from operations	$(25,604,503)	$(1,219,987)	$(24,384,516)	(1999)%
Other (income) expenses:				
Gain on extinguishment of debt	(120,810)	—	120,810	—%
Interest expense	5,181	36,268	(31,087)	(86)%

	Three Months Ended March 31,		Change	
	2021	2020	Dollars	Percentage
Change in fair value of embedded put	—	27,160	(27,160)	—%
Loss on conversion of convertible notes payable	—	306,641	(306,641)	—%
Total other (income) expenses	(115,629)	370,069	(485,698)	131%
Loss before tax	(25,488,874)	(1,590,056)	(23,898,818)	(1503)%
Tax expense	—	—	—	—%
Net loss	$(25,488,874)	$(1,590,056)	$(23,898,818)	(1503)%

Operating expenses

Research and development expenses

For the three months ended March 31, 2021, we recorded $2,908,705 of research and development expenses compared to $604,334 for the three months ended March 31, 2020. The increase of $2,304,371 related primarily to an increase of $1,661,920 in clinical trials and development expenses related to ZYESAMI (aviptadil), an increase of $642,450 in other research and development expenses, which includes an increase of $5,449 in stock-based compensation expense.

General and administrative expenses

For the three months ended March 31, 2021, we recorded $2,101,402 of general and administrative expenses compared to $615,653 for the three months ended March 31, 2020. The increase of $1,485,749 related primarily to $448,100 of consultant fees, $328,586 of payroll expenses, $277,446 in stock compensation expense, $272,757 of legal and professional fees, and $158,860 in other general and administrative expenses.

Settlement Expense

For the three months ended March 31, 2021, we recorded $21,365,641 of settlement expense related to the GEM Warrant reflecting the incremental value through the date of issuance compared to $0 of settlement expense for the three months ended March 31, 2020.

Reimbursement of expenses from Relief Therapeutics

For the three months ended March 31, 2021, we recorded $771,245 of reimbursement of expenses from Relief Therapeutics compared to $0 of reimbursement of expenses from Relief Therapeutics for the three months ended March 31, 2020. We have received $10,904,065 from Relief in accordance with the Relief Agreement and had a fully reserved accounts receivable balance of $3,676,826 as of March 31, 2021. As of March 31, 2021, Relief has not paid the remaining accounts receivable balance.

Gain on extinguishment of debt

For the three months ended March 31, 2021, we recorded $120,810 of gain on extinguishment of debt compared to $0 for the three months ended March 31, 2020. The increase of $120,810 related to the forgiveness of the $120,810 in loan funding from the Paycheck Protection Program, established pursuant to the Coronavirus Aid, Relief, and Economic Security Act and administered by the U.S. Small Business Administration, which resulted in a gain on extinguishment for the outstanding principal and accrued and unpaid interest.

Interest expense

For the three months ended March 31, 2021, we recorded $5,181 of interest expense compared to $36,268 for the three months ended March 31, 2020. The decrease of $31,087 related primarily to the conversion of convertible notes payable in 2020.

Change in fair value of embedded put

For the three months ended March 31, 2021, we recorded $0 of change in fair value of embedded put compared to $27,160 for the three months ended March 31, 2020. The decrease of $27,160 related primarily to the decrease in fair value of the conversion option attached to the convertible notes payable.

Loss on conversion of convertible notes payable

For the three months ended March 31, 2021, we recorded $0 of loss on conversion of convertible notes payable compared to $306,641 for the three months ended March 31, 2020. The decrease of $306,641 related to the loss on extinguishment for the difference between the carrying value of the convertible notes, unamortized debt discount, and the fair value of the embedded put option, and the fair value of common shares issued.

Results of operations for the years ended December 31, 2020 and 2019

The following table sets forth our selected statements of operations data for the following periods:

	Years ended December 31,		Change	
	2020	2019	Dollars	Percentage
	(Unaudited)			
Operating expenses:				
Research and development	$ 10,625,032	$ 3,495,648	$ 7,129,384	204%
General and administrative	11,435,658	2,767,590	8,668,068	313%
Settlement expense	39,486,139	—	39,486,139	100%
Reimbursement of expenses from Relief Therapeutics	(10,160,421)	—	(10,160,421)	(100)%
Total operating expenses	51,386,408	6,263,238	45,123,170	720%
Loss from operations	$(51,386,408)	$(6,263,238)	$(45,123,170)	(720)%
Other expenses:				
Loss on conversion of convertible notes payable	$ 306,641	$ —	$ 306,641	100%
Interest expense	56,695	303,057	$ (246,362)	(81)%
Change in fair value of embedded put	27,160	162,866	(135,706)	(83)%
Total other expenses	(390,496)	(465,923)	75,427	16%
Loss before tax	(51,776,904)	(6,729,161)	(45,047,743)	(669)%
Tax expense	—	—	—	—%
Net loss	$(51,776,904)	$(6,729,161)	$(45,047,743)	(669)%

Operating expenses

Research and development expenses

For the year ended December 31, 2020, we recorded $10,625,032 of research and development expenses compared to $3,495,648 for the year ended December 31, 2019. The increase of $7,129,384 related primarily to an increase of $5,573,581 in clinical trials and development expenses related to ZYESAMI (aviptadil); an increase of $1,555,803 in other research and development expenses, which includes an increase of $285,517 in stock-based compensation expense.

General and administrative expenses

For the year ended December 31, 2020, we recorded $11,435,658 of general and administrative expenses compared to $2,767,590 for the year ended December 31, 2019. The increase of $8,668,068 related primarily to $5,382,905 of warrant expense issued to two board members, $2,334,744 of legal and professional fees, $759,160 of payroll expenses, and $204,095 of consultant fees, which is partially offset by a decrease of $65,431 in other general and administrative expenses.

Settlement Expense

For the year ended December 31, 2020, we recorded $39,486,139 of settlement expense related to the GEM Warrant compared to $0 of settlement expense for the year ended December 31, 2019.

Reimbursement of expenses from Relief Therapeutics

For the year ended December 31, 2020, we recorded $10,160,421 of reimbursement of expenses from Relief Therapeutics compared to $0 of reimbursement of expenses from Relief Therapeutics for the year ended December 31, 2019. We had received $9,329,031 from Relief in accordance with the Relief Agreement and had an accounts receivable balance at December 31, 2020 from Relief of $831,390, net of an allowance for doubtful accounts of $257,463.

Loss on conversion of convertible notes payable

For the year ended December 31, 2020, we recorded $306,641 of loss on conversion of convertible notes payable, and did not record any such expense for the year ended December 31, 2019. The increase of $306,641 related to the loss on extinguishment for the difference between the carrying value of the convertible notes, unamortized debt discount, and the fair value of the embedded put option, and the fair value of common shares issued.

Interest expense

For the year ended December 31, 2020, we recorded $56,695 of interest expense compared to $303,057 for the year ended December 31, 2019. The decrease of $246,362 related primarily to the conversion of convertible notes payable in 2020.

Change in fair value of embedded put

For the year ended December 31, 2020, we recorded $27,160 of change in fair value of embedded put compared to $162,866 for the year ended December 31, 2019. The decrease of $135,706 related primarily to the decrease in fair value of the conversion option attached to the convertible notes payable.

Liquidity and Capital Resources

We have generated no revenues, has incurred operating losses since inception, and expects to continue to incur significant operating losses for the foreseeable future and may never become profitable. From the inception of the ZYESAMI drug development program we had funded all operating expenses related to the US development of ZYESAMI and the portion of corporate overhead attributable to that program from the Relief Agreement. The proceeds recorded as “Reimbursement of expenses from Relief Therapeutics” amounted to $771,245 for the three months ended March 31, 2021.

Pursuant to the Relief Agreement, we are responsible for not exceeding the Relief Product trial budget of $8.3 million by more than 30% (approximately $10.7 million) for the original sample size of 144 participants (the “Initial Budget”). In October 2020, the study’s Data Safety Monitoring Board and statistical consultant advised us to increase the size of the study to at least 200 participants, resulting in an additional $4 million in potential study costs. The Relief Agreement states that costs of drug formulation, manufacture, CMC, stability, etc., are not included within the Initial Budget, however, Relief is required to fund the costs of formulation, stability, and manufacturing at MedisourceRx, Bachem, and Nephron Pharmaceuticals.

The Relief Agreement states that in the event Relief does not approve additional overages to the Initial Budget, we shall be free to bring in other parties in order to complete the aviptadil study. The Relief Agreement further provides for Relief to fund the costs associated with the clinical development of the inhaled Relief Product in the United States in reliance upon our agreement to conduct, manage, supervise and oversee its clinical development. Should Relief not fund the costs associated with the clinical development of the inhaled Relief Product in the United States, then we shall have the freedom to bring a replacement investor.

As of June 9, 2021, Relief has not paid approximately $4 million in invoiced costs associated with conduct of the Intravenous trial, reformulation, and manufacture of ZYESAMI incurred subsequent to December 31, 2020. Additionally, as of June 9, 2021, Relief has not funded the costs of the inhaled ZYESAMI product. We have initiated the inhaled use clinical trial with other capital. We intend to use the proceeds of the merger transaction to fund the ZYESAMI inhaled trial for COVID-19.

We expect to continue to incur operating losses and net cash outflows until such time as it generates a level of revenue from sale or licensing of drug products to support its cost structure. There is no assurance that we will achieve profitable operations and if achieved, whether it will be sustained on a continued basis.

We intend to fund ongoing activities by raising additional capital through equity or debt financings and believes that existing resources and such funding will provide sufficient liquidity through the next twelve months. There can be no assurance that we will be successful in raising that additional capital or that such capital, if available, will be on terms that are acceptable to us. If we are unable to raise sufficient additional capital, we may be compelled to reduce the scope of its operations and planned capital expenditures.

Our research programs beyond 2021 would require additional funding either from sales of product or from external investment.

Until such time as we are allowed to market its therapeutic products or completes a sale to a governmental entity, we are dependent upon obtaining necessary equity and/or debt financing to continue operations. We cannot make any assurances that sales of ZYESAMI will commence in 2021 or that additional financings will be available to it and, if available, on acceptable terms or at all. This could negatively impact our business and operations and could also lead to the reduction of our operations.

Cash Flow Summary for the three months ended March 31, 2021 and 2020

The following table shows a summary of our cash flows for each of the periods shown below:

	Three months ended March 31,	
	2021	2020
	(Unaudited)	
Net cash used in operating activities	$(3,013,810)	$(832,657)
Net cash provided by financing activities	14,426,876	226,994
Net increase (decrease) in cash	$ 11,413,066	$(605,663)

Operating activities

During the three months ended March 31, 2021, operating activities used $3,013,810 of cash, primarily resulting from a net loss of $25,488,874, reduced by non-cash charges of $21,649,055, including $21,365,641 of non-cash settlement expense related to the GEM Warrant, $371,698 of stock-based compensation expense, $120,810 of gain on the extinguishment of debt, $32,050 of non-cash interest expense, $476 of depreciation expense, and changes in operating assets and liabilities of $826,009, including a decrease of $1,185,044 in accrued expenses and other liabilities and increases of $831,390 and $49,738 in accounts receivable and prepaid expenses and other assets, respectively, partially offset by an increase of $1,229,401 in accounts payable.

During the three months ended March 31, 2020, operating activities used $832,657 of cash, primarily resulting from a net loss of $1,590,056, partially reduced by non-cash charges of $675,821, including $236,763 of non-cash interest expense, $16,454 of amortization of debt discount, and $88,803 of stock-based compensation expense.

Investing activities

There were no investing activities for the three months ended March 31, 2021 and 2020, respectively.

Financing activities

During the three months ended March 31, 2021, financing activities provided $14,426,876 of cash, primarily resulting from the issuance of shares of our common stock.

During the three months ended March 31, 2020, financing activities provided $226,994 of cash, primarily resulting from the issuance of shares of our common stock.

Cash Flow Summary for the years ended December 31, 2020 and 2019

The following table shows a summary of our cash flows for each of the periods shown below:

	Years ended December 31,	
	2020	2019
	(Unaudited)	
Net cash used in operating activities	$ (2,266,367)	$ (5,542,325)
Net cash used in investing activities	(1,501)	(3,552)
Net cash provided by financing activities	3,248,960	5,802,002
Net increase in cash	$ 981,092	$ 256,125

Operating activities

During the year ended December 31, 2020, operating activities used $2,266,367 of cash, primarily resulting from a net loss of $51,776,904 reduced by non-cash charges of $46,057,962, including $39,486,139 of settlement expense, $5,382,905 of warrant expense for services, $730,405 of stock-based compensation expense, $306,641 of loss on conversion of convertible debt, and changes in operating assets and liabilities of $3,452,575, including increases of $3,243,610 and $1,183,143 in accrued expenses and other liabilities and accounts payable, respectively, partially offset by increases of $831,390 and $142,788 in accounts receivable and prepaid expenses and other assets, respectively.

During the year ended December 31, 2019, operating activities used $5,542,325 of cash, primarily resulting from a net loss of $6,729,161, partially reduced by non-cash charges of $1,396,041, including $499,994 of noncash consulting expense and $433,910 of stock-based compensation expense.

Investing activities

During the year ended December 31, 2020, investing activities were primarily due to the purchase of computer equipment.

During the year ended December 31, 2019, investing activities were primarily due to the purchase of computer equipment.

Financing activities

During the year ended December 31, 2020, financing activities provided $3,248,960 of cash, primarily resulting from $2,579,114 from the issuance of shares of our Common Stock, $50,004 from the issuance of shares of our preferred stock, and $619,842 in proceeds from notes payable.

During the year ended December 31, 2019, financing activities provided $5,802,002 of cash, primarily resulting from the issuance of common stock.

Contractual Obligations and Commitments

See Note 7, Commitments and Contingencies, of the notes to our condensed consolidated financial statements for the three months ended March 31, 2020 included elsewhere in this prospectus for further discussion of our commitments and contingencies.

Milestone Payments

Pursuant to the legal settlement with 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 shall be due to SHMH, together with milestone payments of $250,000, upon completion of phase 3 trials and commercial sale of NRX-101. The milestone payments for developmental and commercial milestones range from $100,000 to $750,000. Annual maintenance fees range up to $150,000.

Off-Balance Sheet Arrangements

We are not party to any off-balance sheet transactions. We have no guarantees or obligations other than those which arise out of normal business operations.

Critical Accounting Policies and Significant Judgments and Estimates

Our 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 U.S. GAAP. The preparation of these financial statements requires us 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 U.S. GAAP, we evaluate our estimates and judgments on an ongoing basis. The most significant estimates relate to the valuation of conversion features of convertible notes and common stock, the valuation of stock options and warrants and the valuation allowance of deferred tax assets resulting from net operating losses. We base our estimates and assumptions on current facts, historical experiences, and various other factors that we believe 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.

We define 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 we apply those principles. While its significant accounting policies are more fully described in Note 2 to its financial statements appearing elsewhere in this prospectus, we believe the following are the critical accounting policies used in the preparation of its financial statements that require significant estimates and judgments.

Fair value of common and preferred stock

In order to determine the fair value of shares of our Common Stock, our board of directors considered, among other things, contemporaneous valuations of its common stock and preferred stock based on arms-length transactions with third party investors and recent sales of our Common Stock.

Share-Based Compensation

Our stock-based awards are classified as equity (stock options and warrants). We recognize related share-based compensation expense based on the grant date fair value of the awards. We estimate the fair value of all stock-based awards using the Black-Scholes-Merton valuation model which requires the use of subjective assumptions that could materially impact the estimation of fair value and related compensation expense to be recognized. One of these assumptions include the expected volatility of our stock price. Developing this assumption requires the use of judgment. We are a private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies. We also estimate the fair value of our common stock based on third party sales of our common stock.

Income taxes—Valuation Allowance

Income taxes are recorded in accordance with Accounting Standards Codification Topic 740, Income Taxes ("ASC 740"), which provides for deferred taxes using an asset and liability approach. We recognize 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 bases 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.

BUSINESS

Company Overview

NRx Pharmaceuticals is a clinical-stage small molecule pharmaceutical company which develops, through its wholly-owned operating subsidiary, NeuroRx, Inc., a Delaware corporation, novel therapeutics for the treatment of central nervous system disorders and life-threatening pulmonary diseases. We completed a phase 3 clinical trial and submitted an EUA with the FDA on May 31, 2021 of ZYESAMI to treat COVID-19, a life-threatening respiratory condition, and are in phase 3 clinical development of drug products to treat life-threatening central nervous system ("CNS") conditions. The respiratory product class of products to market is based upon the neuropeptide Vasoactive Intestinal Peptide ("VIP") that is secreted by neuroendocrine cells throughout the body, and is concentrated in the human lung and brain. VIP showed promise for treating Acute Respiratory Distress Syndrome ("ARDS") in 2005 and became uniquely important in 2020 when it was demonstrated to have potential to treat COVID-19.

Aviptadil is the generic name for synthetically-manufactured VIP, as distinct from the natural peptide. Our firstVIP-derived product—ZYESAMI (a reformulation of RLF-100), our COVID-19 Drug—was awarded Fast Track designation by the FDA in June 2020 and admitted to the Coronavirus Treatment Acceleration Program. The term "VIP" should be interpreted as referring to the natural peptide produced in the human body, while the terms "aviptadil" and "ZYESAMI" refer to our drug substance (i.e., active pharmaceutical ingredient) and drug product, respectively. We have completed a phase IIb/III randomized controlled trial of ZYESAMI vs. placebo (NCT 04311697), conducted under FDA Fast Track designation. The phase IIb/III trial enrolled 196 patients and the last patient completed 60 days of observation on February 24, 2021. Across all patients and sites, ZYESAMI met the primary prespecified endpoint for "alive and free of respiratory failure" at day 60 (P = .02) when adjusting for ventilation status and treatment site, and demonstrated a statistically significant increase in odds of survival through day 60, whether or not the participant was fully recovered (P = < .01). The statistical analysis plan submitted to the FDA prior to commencement of the study specified that statistical regression analysis would be used to make such adjustments. Without adjustment for ventilation status and treatment site, there is not a statistically significant advantage seen in patients treated with ZYESAMI compared to those treated with placebo. To our knowledge, ZYESAMI is the first COVID-19 therapeutic to achieve these results in a randomized, double-blind multicenter trial. Although these results do not provide a guarantee that ZYESAMI will be deemed to be safe or effective for the treatment of COVID-19 and extensive clinical testing and regulatory approval will be required before ZYESAMI can commonly be prescribed for the treatment of COVID-19, on the basis of these findings, we applied for Emergency Use Authorization with the FDA on May 31, 2021, and plan to apply for Breakthrough Therapy Designation and to submit an application for an NDA. Additional trials are being conducted via the NIH-sponsored ACTIV3 program and the I-SPY program.

ZYESAMI is named for Dr. Sami Said, Distinguished Professor at the State University of New York at Stony Brook, who discovered VIP in 1970 and published more than 370 peer-reviewed studies on its effects. Its potential effectiveness in COVID-19 is based on the principle that the coronavirus specifically invades the Alveolar Type II cell of the pulmonary (lung) epithelium, where it blocks surfactant production, replicates into millions of virus particles, unleashes inflammatory cytokines, causes cell death type, and shuts down production of surfactant, which is the fluid that lines the lung and allows oxygen to pass from the air to the blood. ZYESAMI is shown in preclinical laboratory experiments at the Oswaldo Cruz Institute (Rio de Janeiro, Brazil) to increase the production of surfactant, block replication of the SARS-CoV-2 coronavirus in human lung cells, block cytokine production, and block lung cell death (cytopathy). VIP is shown to have important potential effects in the treatment of other lung diseases including Chronic Obstructive Pulmonary Disease ("COPD"), Sarcoidosis, asthma/allergy, and Chronic Respiratory Inflammation Syndrome. We intend to research the use of VIP in these and other conditions in the future. VIP is also known to be active in the brain and we plan to explore its potential use in the treatment of Huntington's Disease, Multiple Sclerosis, and other CNS diseases if an appropriate mechanism of CNS delivery can be developed.

Our second class of products to market isNRX-101, the first investigational oral antidepressant to be granted Breakthrough Therapy designation and a Special Protocol Agreement by the FDA for Severe Bipolar Depression in Patients with Acute Suicidal Ideation & Behavior. We are concentrated on the research, development and commercialization of this and other products for the treatment of patients suffering from suicidal ideation in the

setting of bipolar depression and major depressive disorder ("MDD") as well as Post-traumatic Stress Disorder ("PTSD") and Obsessive Compulsive Disorder. Drugs that inhibit the brain's N-methyl-D-aspartate ("NMDA") receptor have been explored for the treatment of the above conditions since the finding that ketamine has potent effects in reducing depressive and suicidal ideation. However, attempts by other drug manufacturers to use NMDA-inhibiting drugs for this purpose have been limited by neurotoxicity, hallucinations, habituation (i.e., addictive properties), blood pressure elevations, and lack of oral bioavailability.

The key, patented discovery underlying our approach is the unanticipated synergy discovered by Prof. Daniel Javitt, MD, PhD, when NMDA antagonists are combined with inhibitors of the brain's 5-HT2A receptor (e.g., SSRI antidepressants and atypical antipsychotic drugs). This synergy has now been demonstrated in both laboratory rodent behavioral experiments and in multiple phase 2 clinical trials. Dr. Javitt observed that when patients with depression were treated with DCS, an NMDA antagonist, they manifested increased antidepressant effect, but did not exhibit the hallucinations and other NMDA effects previously reported with DCS. He further observed that the DCS appeared to blunt the antidepressant side effects (akathisia) common to all known serotonin-targeted anti-depressants. This effect was replicated in our phase 2 clinical trial and has been shown in various rodent behavioral models in the laboratory.

This synergy is the key discovery underlying the patent portfolio described below. The side effects of NMDA drug are blocked by the5-HT2A drug and, in turn, the NMDA component blocks akathisia, a known side effect of 5-HT2A-blocking drugs which is known to predispose to suicide. This dual-targeted approach, to our knowledge, is not the focus of any other clinical stage pharmaceutical company and is the basis of our worldwide patent portfolio, which currently encompasses 40+ filed patent applications, and 30+ issued patents in multiple jurisdictions covering both Compositions of Matter and Methods of Use. The relevant patents and patent applications in this portfolio are exclusively licensed to NRx Pharmauceticals by Glytech LLC ("Glytech"), a Delaware limited liability corporation solely owned by Dr. Daniel Javitt, and by Sarah Herzog Memorial Hospital Ezrat Nashim ("SHMH"), a non-profit organization (Amutah) organized under the laws of the State of Israel.

Patents under the Glytech license, which cover compositions of matter (including NRX-101 and pipeline therapeutic candidates) and methods of use (including methods of using NRX-101 in treatment of bipolar depression with suicidal ideation and in treating PTSD) have been granted in the USA, Europe (including validation in 18 members of the European Patent Convention), Japan, Australia and China. Additional patent applications under the Glytech license (covering compositions of matter and methods of use of pipeline therapeutic candidates, and methods of use of NRX-101 in treating additional depressive disorders) are pending in each of these countries as well as in Canada. Assuming all maintenance fees are timely paid in each jurisdiction and that the patents are not held invalid or unenforceable by a court or patent office, the patents licensed to NRx Pharmaceuticals by Glytech will expire in each jurisdiction in which they have been granted in 2033 (for the base NRX-101 patents) and 2038 (for the PTSD treatment patents). See the section titled "*Summary of NRx Pharmaceuticals Material In-licensing Obligations—NRX-100/101—Glytech Development and License Agreement*" for more information.

Patents under the SHMH license, which cover compositions of matter that may represent pipeline therapeutic candidates for NRx Pharmaceuticals, and methods of use of such compositions in treating certain depressive disorders, have been granted in the USA and Europe with additional patent applications covering similar subject matter pending in these countries and in Israel and Canada. Assuming all maintenance fees are timely paid in each jurisdiction and that the patents are not held invalid or unenforceable by a court or patent office, the patents licensed to NRx Pharmaceuticals by Herzog will expire in each jurisdiction in which they have been granted in 2032. See the section titled "*Summary of NRx Pharmaceuticals Material In-licensing Obligations—NRX-100/101—Sarah Herzog Memorial Hospital License Agreement*" for more information.

ZYESAMI is not currently covered by any US or international patent. US Patent 8178489B2 and foreign counterparts does not apply to ZYESAMI because it covers only formulations of aviptadil that are formulated in a buffer. Laboratory evidence suggests that Vasoactive Intestinal Peptide (aviptadil) aggregates and may be inactivated by known buffers. We are engaged in a discovery process to extend the stability of ZYESAMI and has made certain discoveries that may lead to future patent filings and which may or may not lead to allowed patent claims. In the event that no patent protection is granted covering the formulation of ZYESAMI, if the drug is approved by FDA, it is anticipated to receive at least five years of data exclusivity from the FDA under what is commonly known as "paragraph 4" protections. Should no patents be granted by the end of this data exclusivity period, competitors may be able to market generic versions of ZYESAMI.

In addition to its licensed patent portfolio, we own five trademark applications that are currently pending in the US Trademark Office, seeking to register the following marks:

- CYCLURAD™
- SAMIVIP™
- SAMIVIR™
- SAMIAIR™
- ZYESAMI™

The application to register CYCLURAD was filed on December 26, 2017, in International Class 5, for pharmaceutical preparations for treating depression (such as NRX-101). It was allowed by the US Trademark Office on July 10, 2018, and is currently in its fifth extension of time for filing of a Statement of Use.

The application to register SAMIVIP was filed on April 17, 2020, in International Class 5, for pharmaceutical preparations for treating viral and other diseases and disorders (such as Aviptadil). It was allowed by the US Trademark Office on October 13, 2020. A Statement of Use was not filed in this matter by the deadline of April 13, 2020, and the application was refiled in the US Trademark Office on May 6, 2021, and it has been restored to pending status.

The application to register SAMIVIR was filed on August 2, 2020, in International Class 5, for pharmaceutical preparations for treating viral and other diseases and disorders (such as Aviptadil). It was allowed by the US Trademark Office on February 23, 2021, and a Statement of Use is due for filing in the US Trademark Office by August 23, 2021.

The application to register SAMIAIR was filed on September 14, 2020, in International Class 5, for pharmaceutical preparations for treating viral and other diseases and disorders (such as Aviptadil). It was allowed by the US Trademark Office on February 23, 2021, and a Statement of Use is due for filing in the US Trademark Office by August 23, 2021.

The application to register ZYESAMI was filed on November 10, 2020, in International Class 5, for pharmaceutical preparations for treating viral and other diseases and disorders (such as Aviptadil). It is currently undergoing examination in the US Trademark Office.

We believe our products are urgently needed by patients because no current serotonin-targeted antidepressant (such as SSRI drugs) or atypical antipsychotic (*e.g.*, the D2/5HT2A drugs) has been shown to decrease suicidal ideation in patients with bipolar depression, MDD, or PTSD. Moreover, all drugs in these classes bear an FDA-mandated warning regarding increased risk of suicide in vulnerable patients. Ketamine has been shown to decrease suicidal ideation because of its NMDA-blocking properties, but is known to be hallucinogenic, addictive, potentially neurotoxic, and not administrable by mouth. Management is not aware of Ketamine being developed for bipolar depression by any commercial sponsor in the U.S. Accordingly, the only FDA-approved therapy for patients with suicidal bipolar depression remains Electroconvulsive Therapy ("ECT"), a treatment that is known to be effective, but to have a large number of serious side effects.

We have commenced a pivotal Phase IIb/III clinical trial under an FDA Special Protocol Agreement of our lead product candidate,NRX-101. Analysis of our first phase II study, the STABIL-B trial, showed a statistically significant reduction in depression (P=0.03) and suicidal ideation (P=0.02) vs. the control group over 42 days using statistical methods agreed to with the FDA under our Special Protocol Agreement.

Path to regulatory approval of ZYESAMI

Over a period of eleven months, commencing March 24, 2020, NRx Pharmaceuticals, with support from Lavin Statistical Consultants, the Chesapeake Regulatory Group, Covance Laboratory Services, Target Health, LLC, and Hyman Phelps McNamara:

- filed an Investigational New Drug Application for intravenous ZYESAMI (aviptadil acetate);
- formulated that new drug for its first use under cGMP;
- obtained FDA Fast Track designation;
- initiated a first clinical trial (NCT 04311697) at 10 US hospitals;
- enrolled 196 participants, all of whom were successfully treated with either drug or placebo;
- completed the last visit for the last participant on February 22, 2021.

In the setting of a public health emergency declared by the US Secretary of Health and Human Services, the FDA is empowered to grant "Emergency Use Authorization" ("EUA") to drugs and vaccines that may be beneficial in combating the emergency. In September 2020, we opened a Pre-EUA file with FDA and requested a narrow EUA only to treat patients who were already allowed under the Expanded Access Protocol granted by FDA in July 2020 but whose hospitals could not implement the administrative requirements of the Expanded Access Program. The FDA notified us in December 2020 that EUA could only be granted upon submission of randomized, placebo-controlled data and stated that such data would be reviewed "promptly" upon submission. In a subsequent communication in January 2021, the FDA advised us that review of complete efficacy and safety data would be required for an EUA determination.

At one month following "last visit," we reported that thepre-specified primary endpoint was met and advised the public that it planned to file for EUA. We also shared this information with the FDA under the open Pre-EUA file.

Over the 8 weeks following "last visit," the combined research team reviewed via electronic and manual means approximately 53,909 individual case report forms and verified them against source data (*i.e.* electronic medical records and physician reports) by study monitors. 1185 Treatment Emergent Adverse Event reports were analyzed and 180 Serious Adverse Events were investigated in detail by medical monitors, each requiring a detailed narrative. 5988 concurrent medication reports were evaluated to detect possible Adverse Events. Over the next two weeks all findings were reviewed with the individual site Principal Investigators and each signed off on the accuracy of the case reports. The database was formally locked on May 7, 2021.

On May 31, 2021, we filed for EUA with the FDA for ZYESAMI, thereby delivering a regulatory file delineating safety and efficacy data of an investigational drug within 3 months of last visit in a clinical trial. Although there can be no assurance that the FDA will conclude that ZYESAMI meets or exceeds the EUA standard of "may be effective" in the treatment of COVID-19, we are hopeful that the FDA will grant EUA to ZYESAMI.

Clinical Trials and Objectives

NRX-101 Phase IIb/III Clinical Trial

We initiated a Phase IIb/III clinical research program ofNRX-101 during the second half of 2017 under an FDA IND application that was granted Fast Track designation by the FDA in August 2017 and was granted Breakthrough Therapy designation by the FDA in November 2018. In April 2018, the FDA granted a Special Protocol Agreement. We successfully completed a Phase II clinical trial of NRX-101 in patients with Severe Bipolar Depression and Acute Suicidal Ideation following stabilization with a single dose of ketamine and saw a statistically significant reduction in depression (P=0.04) and suicidal ideation (P=0.02) compared to lurasidone alone over 42

days of treatment. No Serious Adverse Events or dose-limiting adverse events were seen in the NRX-101 group. If this statistically-significant advantage is replicated in the Phase III clinical trial, under the terms agreed to with the FDA in our Special Protocol Agreement, we aim to submit an NDA to the FDA for the regulatory approval and commercialization of NRX-101 in the United States by year end 2021 and MAAs with the EMA by 2022.

ZYESAMI Clinical Trials

Below is a table summarizing the clinical trials and status, each of which is discussed in more detail in the sections below.

Trial Name	IND NCT	Phase	Route of Admin.	Sponsor	Enrollment	Status /Results
COVID-AIV	149,152 04311697	IIb/III	IV	NRx Pharmaceuticals	131 drug/65 control	Completed. Met primary endpoint after statistical adjustment for ventilation status and treatment site. Did not meet primary endpoint without adjusting for prespecified covariates. (see page 195)
High Comorbidity Open Label	149,152 04453839	II	IV	Investigator Sponsored	21 drug/45 standard of care	Completed. Significant difference in mortality and recovery. (see pages 198 and 201)
ACTIV3b/TESICO	154,701 04843761	III	IV	NIAID NIH	660 in four arms	Enrolling (see pages 189)
SAMICARE Expanded Access	149,152 04453839	III	IV	NRx Pharmaceuticals	>300 enrolled on ZYESAMI	Observational, non-experimental. Ongoing (see page 199)
AVICOVID-2	151,070 04360096	IIb/III	Inhaled	NRx Pharmaceuticals	>10 of 144	Ongoing (see pages 189-190)
I-SPY	150,378 04488081	II	Inhaled	Quantum Leap	~100	Approved by FDA, awaiting enrollment (see pages 189 and 200)

ZYESAMI Phase IIb/III Clinical Trial for treatment of Respiratory Failure in CriticalCOVID-19 (COVID-AIV)

We have completed a 196-person phase IIb/III clinical trial of intravenous ZYESAMI for the treatment of respiratory failure in patients with Critical COVID-19 (the "Intravenous Trial"). The US Secretary of Health and Human Services has declared theCOVID-19 pandemic to be a public health emergency under the terms of the Pandemic and All Hazards Preparedness Reauthorization Act of 2013. Accordingly, ZYESAMI can be authorized for widespread use in the United States under the standard of safe and "may be effective," rather than the more stringent standard of "proven to be safe and effective in adequately-controlled trials" required for traditional drug approval under section 505.b.1 of the Food Drug and Cosmetics Act.

In the Intravenous Trial, across all patients and sites, ZYESAMI met the primary endpoint for successful recovery from respiratory failure at days 28 (P = .014) and 60 (P = .013) and also demonstrated a statistically significant advantage in likelihood of surviving to day 60 (P = < .001) as discussed below when adjusting for prespecified covariates of baseline ventilation status and treatment site. The study did not demonstrate a statistically-significant difference on primary endpoint without statistical adjustment for these pre-specified covariates.

Participants were enrolled between May and December 2020 at 10 U.S. hospitals and followed through day 60. Six of these hospitals had24-hour presence of critical care physicians, fellows, and respiratory therapists in the ICU and were classified as tertiary care hospitals. The primary endpoint was pre-specified by FDA as "alive and free of respiratory failure" at day 60. Secondary endpoints included survival and duration of hospital stay in patients who recover.

Across all patients, without controlling for ventilation status or treatment site, a 10-day shorter median hospital stay was seen in ZYESAMI-treated patients compared to placebo-treated patients (P=.025) and a small, but not statistically significant, advantage favoring ZYESAMI was seen on primary endpoint at day 60.

When controlling for ventilation status and treatment site, a significant advantage favoring ZYESAMI was seen (P=.018), with the largest effect in the subgroup of patients (n=98) treated by High Flow Nasal Cannula (HFNC), compared to those treated with mechanical or non-invasive ventilation at tertiary care hospitals. In this group, ZYESAMI patients had a 71% chance of successful recovery by day 28 vs. 48% in the placebo group (P=.017) and a 75% rate of successful recovery by day 60 vs. 55% in the placebo group (P=.036). Eighty-four percent (84%) of HFNC patients treated at tertiary medical centers with ZYESAMI survived to day 60 compared with 60% of placebo patients (P=.007). The finding that patients fared substantially better in tertiary care centers as compared to regional hospitals may be influenced by the intensity of the public health crisis at the regional hospitals that participated in the Intravenous Trial, with higher overcapacity in their ICUs, implementation of temporary ICU beds, and shortages of critical care staff.

We filed for Emergency Use Authorization for ZYESAMI on May 31, 2021, which Emergency Use Authorization will provide us with a year in which to complete the CMC, plant inspections, and advisory board requirements associated with traditional drug approvals.

ZYESAMI inclusion in NIH ACTIV3b/TESICO Clinical Trial for Critical COVID-19 and Respiratory Failure (ACTIV3b / TESICO)

ZYESAMI has been selected by the steering committee of the Therapeutics for Severely Ill Inpatients withCOVID-19 ("TESICO") protocol funded by Operation Warp Speed through the National Heart, Lung, and Blood Institute and the National Institute for Allergy and Infectious Disease of the National Institutes of Health ("NIH"). The protocol is part of the NIH AcceleratingCOVID-19 Therapeutic Interventions and Vaccines ("ACTIV") public private consortium. This clinical trial anticipates enrolling 800 patients in study sites located in US, EU, and UK in a factorial design that will compare ZYESAMI to placebo and to Veklury (Remdesivir) both alone and in combination with ZYESAMI for the treatment of Critical COVID-19 with respiratory failure. The TESICO trial was approved by the FDA and the Advarra IRB in the first quarter of 2021 and recruited its first patient in April 2021.

ZYESAMI inclusion in I-SPY Clinical Trial for severe and critical COVID-19 with early or impending respiratory failure (I-SPY)

We have signed a contract with Quantum Leap Healthcare Corporation for the inclusion of ZYESAMI in theI-SPY clinical trial platform, whereby inhaled ZYESAMI will be included as part of a panel of four drugs being tested as part of the I-SPY COVID-19 Trial, an adaptive platform trial for critically ill patients.

Phase IIb/III Clinical Trial for Inhaled ZYESAMI in Early COVID-19 (AVICOVID-2)

Although our initial focus has been on the use of ZYESAMI in patients with CriticalCOVID-19 and respiratory failure (*i.e.*, patients who require ventilation, extracorporeal oxygenation, or high flow nasal oxygen to survive), we have received permission from the FDA to test inhaled ZYESAMI in patients with early disease. We believe that inhaled drug will reach the ATII cells in the lung better than the intravenous drug, provided patients are still able to inhale normally and do not have inflammatory debris clogging the alveoli. We have contracted with COVANCE, Inc. to provide Contract Research Organization support for this clinical trial. This clinical trial commenced in January 2021 and is expected to conclude by September 2021.

Clinical Trials of Aviptadil in other lung conditions

Clinical trials of Aviptadil in preparations not formulated by NRx Pharmaceuticals or Relief have been conducted and reported by others and are documented in the Aviptadil Investigational Medicinal Products Dossier (appendix). We are optimistic that the inhaled form of the drug may show benefit in other lung conditions as well. Phase II studies conducted in the 2008-time frame demonstrated statistically and clinically-significant benefits in the treatment of Sarcoid and Pulmonary Hypertension. Although initial trials in the treatment of pulmonary fibrosis failed, we intend to further explore treatment of both pulmonary and cystic fibrosis. In addition, we intend to address acute lung injury caused by involuntary smoke inhalation, as well chronic lung injury caused by smoking.

Market Opportunity for Our Products

ZYESAMI (Aviptadil)

ZYESAMI offers potential commercial opportunities across multiple disease areas, including CriticalCOVID-19, general ARDS (both in intravenous form), moderate COVID-19, COPD, Sarcoid (all in inhaled form), and other lung injury/disorders. In the United States, as of June 11, 2021, approximately 33,246,578 individuals have contracted COVID-19, and 600,000 individuals have died since March 2020. Assuming a mortality rate of 30%-40%, this translates to approximately 1,300,000 individuals treated in hospital intensive care units ("ICUs") to date. The COVID-19 global pandemic has resulted in rapid adoption of any approved (*e.g.*, under emergency use authorization) and acceptably priced treatment. Positive clinical data in support of emerging compounds has led to very swift changes in use, without the need for significant promotional efforts. Sales levels for such rapid adoption treatments can reach $0.5B-$1B of sales on an annual basis during the pandemic. Even with the recent advent of high efficacy vaccines, it is likely that a background level of severe COVID-19 infections will prevail, just as there is an annual toll of >500,000 hospitalizations and 25,000 deaths from seasonal flu, despite widespread vaccination.

Aside from the current COVID-19 pandemic, approximately 200,000 patients each year in the U.S. are admitted to the ICU for ARDS, and 75,000 die in the U.S. from ARDS annually. ZYESAMI may offer these patients an additional therapeutic option. The incidence of moderate COVID-19 cases is estimated at 4 times the incidence of Critical COVID-19. Should inhaled ZYESAMI demonstrate effectiveness in moderate COVID-19, inhaled ZYESAMI may become an early inpatient and ambulatory COVID-19 therapeutic.

In the US about 6% of individuals over 40 years of age are reported as being diagnosed with COPD. Expansion into such broademon-COVID-19 or critical care/ICU markets as COPD will be dependent on clinical programs that establish the benefit of ZYESAMI (Aviptadil) versus current agents, some of which reached annual sales of approximately $1-2 billion in the US, though many are now generic. Yet, a high level of unmet need remains, and consistently has led to combinations of products to better serve specific populations. Targeting narrowly defined, high unmet need sub-populations, may present attractive opportunities for ZYESAMI (Aviptadil) in this market.

CYCLURAD

In the United States, approximately 30 million people suffer from some form of depression and an additional 12 million people suffer from PTSD. Although having depression is linked to increased risk of mortality from cancer, heart disease and other comorbid conditions, the most common cause of death linked to depression is suicide. Suicide is the 10th most common cause of death in the United States and the third most common cause of death for children and adolescents.

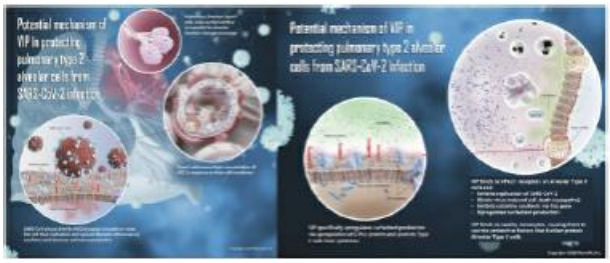
Approximately 10% of those suffering from depression have a variant of the disease known as bipolar depression representing approximately 3.5 million Americans. The risk of acute suicidal ideation/suicidal behavior is uniquely high in patients with bipolar depression, compared to those with MDD, thought disorders and personality disorders. It is estimated that one in two patients with bipolar depression will attempt suicide and, tragically, one in five patients with bipolar depression will die from suicide. Thus, Severe Bipolar Depression with Acute Suicidal Ideation ("SBD/ASI") has uniquely lethal clinical characteristics, on par with those of many cancers. Given that current treatment of SBD/ASI consists of psychiatric hospitalization and possible ECT, this condition represents a clear unmet medical need. This has been validated by the awards of Fast Track and Breakthrough Therapy designation by the FDA. Breakthrough Therapy designation is only awarded by the FDA to a select few drugs that target unmet medical needs in severe medical conditions and which have shown preliminary evidence of efficacy. According to published studies, Breakthrough Therapy designation is associated with a 50% reduction in development time to regulatory approval (4.1 vs. 8 years) and substantially higher rate of regulatory success on first submission (91% vs. 75%) compared to other drugs.

The majority of those suffering from depression have MDD. More than 150 million adults worldwide are suffering from MDD at any given time, according to a 2003 report by the World Health Organization titled Investing in Mental Health. Whereas bipolar depression is episodic and tends to be resolved in two to three months, MDD is characterized by chronic depression. According to the U.S. National Comorbidity Survey Replication published in

2007 (the "NCS-R") more than 16 million adults in the United States, which represents approximately 6.8% of its entire adult population, will suffer from an MDD episode in a 12-month period. Furthermore, according to theNCS-R, approximately 45% of these cases can be classified as severe, and suicide is often a grave complication associated with depression.

ZYESAMI (Aviptadil) Mechanism of Action

Vasoactive Intestinal Peptide ("VIP") was discovered by Professors Sami Said and Victor Mutt at the Karolinska Institute in 1970 and has been the subject of nearly 1,000 peer-reviewed publications. We hold a non-exclusive license to the scientific and intellectual property developed by Dr. Sami Said via a license granted by the Research Foundation of the State University of New York. Although the license is non-exclusive, the Foundation has agreed that it will not grant any other licenses to Foundation Subject Matter that would allow any third-party to manufacture or offer for sale products or services for the treatment of COVID-19 during the term of the SUNY License Agreement (as defined below).



Understanding the mechanism of VIP involves a basic understanding of how the lung transmits oxygen from the air to the blood and carbon dioxide from the blood back to the air. The large airways of the lung (bronchi) branch into smaller units (bronchioles), finally ending in miniscule sacs (alveoli) where oxygenation happens. Alveoli are only able to stay open because they are lined with a detergent-like fluid called surfactant and it is the surface tension of this fluid that allows alveoli to stay open, just like the detergent in a soap bubble allows a miniscule drop of water to maintain its structure. Without surfactant, the lung is incapable of oxygenating, causing a lethal condition called Respiratory Distress.

Surfactant is produced by a small population of cells that comprise only 5% of the lining of the lung, called "Alveolar Type II" ("ATII") cells. These ATII cells nourish the 95% of the lung cells that are largely passive in their function. ATII cells are specifically targeted by the Coronavirus because they have a specific receptor on their surface ("ACE2") that binds to the spike of the virus. Once the virus binds ACE2, it enters the cell, takes over the nucleus of the cell and makes millions of copies of itself. The virus causes the cell to make inflammatory cytokines, which have lethal effects throughout the body. The virus ultimately causes the cell to rupture (cytopathy), thus releasing millions of virus particles that go on to infect more ATII cells and other cells elsewhere in the body.

VIP is uniquely targeted to protecting the ATII cell. Every species of mammal makes an identical form of VIP, suggesting that it has been essential for protecting the lung throughout evolution. In animal models, VIP protects the lung against smoke injury, against acid and other caustic chemicals, and against various infections. It does so by binding to a specific receptor on the ATII cell ("VPAC1"). In the context of COVID-19, as demonstrated in a pre-clinical study by Jonathan Javitt and Jihad G. Youssef, VIP blocks the replication of the Coronavirus in the ATII cell and the production of cytokines, prevents cell death and increases the cell's production of surfactant.

VIP in detail

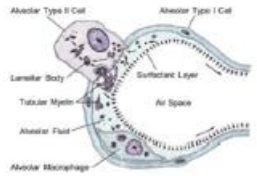


Figure 1: Anatomy of the Alveolus and its surfactant layer.

Figure 1: Anatomy of the Alveolus and its surfactant layer.

As life evolved from aquatic to terrestrial environments, the respiratory epithelium — responsible for exchange of oxygen and carbon dioxide — was required to adapt from contact with a nontoxic aqueous environment to constant contact with atmospheric gasses that are rapidly toxic to epithelial cells. This was achieved via the development of a surfactant layer that lines the air sacs of the lung and both protects the pulmonary epithelium from direct exposure to air while simultaneously maintaining patency of the air sac by creating the biological equivalent of a soap bubble inside each alveolus. The surfactant layer is maintained entirely by the ATII cell (Figure 1) and dysfunction or death of this cell population rapidly leads to alveolar collapse. Indeed, the first pulmonary manifestations of COVID-19 are characterized by a ground glass appearance on Chest x-ray, indicative of alveolar collapse accompanied by blood oxygen desaturation, well before the lung begins to fill with inflammatory transudates and debris.

COVID-19 pneumonitis and respiratory failure is caused by selective attack of theSARS-CoV-2 virus on ATII cells via their ACE2 surface receptors which are not present in alveolar type I cells (Figure 2). ATII cells occupy just 5% of the pulmonary lining but produce all of the surfactant required to maintain surface tension and achieve oxygenation (Figure 1). Viral replication triggers cytokine production and cytopathy (cell rupture), thus unleashing a lethal "cytokine storm." Conventional anti-cytokine (particularly anti-IL6 monoclonal antibody "mab") drugs have proven inadequate to absorb this cytokine load once produced.

The pleomorphic role of VIP in protecting the lung

Although named "Intestinal Peptide" as an accident of history, 70% of VIP is concentrated in the human lung (Figure 3), where it plays a number of protective roles as demonstrated in a pre-clinical study by Jonathan Javitt and Jihad G. Youssef. VIP has been conserved throughout evolution such that all mammals make VIP and there are no known variants. VIP plays a key role in human response to both inflammatory and caustic challenges to epithelium, particularly the pulmonary epithelium. The role of VIP in preventing or mitigating numerous forms of experimental lung injury is extensively documented and human trials have demonstrated an effect of VIP in treating ARDS related to sepsis, pulmonary Sarcoidosis, Pulmonary Hypertension, and various forms of asthma/allergy.

VIP binds to ATII cells via the VPAC1 surface receptor. Although its pharmacokinetics are short-lived, the only extended duration modification to VIP (Phase Bio PB1064) to enter the clinic is VPAC1-selective and demonstrated futility in the first 25 patients, with halted development.

Inhibition of viral replication in human pneumocyte (Calu-3) model: VIP was recently shown to inhibit SARS-CoV-2 replication in infected human Calu-3 cells and monocytes. Calu-3 cells are an appropriate model because they retain many properties of ATII cells, including the ability to make surfactant. Viral replication was assayed by quantitative RT-PCR at the Oswaldo Cruz Institute, a recognized Biocontainment SafetyLevel-3 laboratory using primers, probes, and cycling conditions recommended by the US Centers for Disease Control and Prevention ("CDC") to detect SARS-CoV-2. VIP significantly reduced the SARS-CoV-2 RNA synthesis, achieving 33% and 45% inhibition at 5 nM and 10 nM, respectively (Figure 3). VIP at 1 nM completely blocked the SARS-CoV-2-mediated cytopathic effect, as measured by LDH levels in the cell culture supernatant).

Conditioned media from infected monocytes treated with VIP was administered toSARS-CoV-2 infected Calu-3 cells and resulted in a 50% reduction of virus replication in these cells. This finding suggests that VIP induced monocytes to release antiviral factors which may increase the resistance of neighboring cells to SARS-CoV-2 growth.

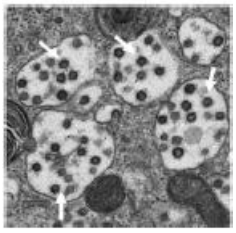


Figure 2: Infection of human type II cells withSARS-CoV. Human type II cells were cultured at anair-liquid interface so as to maintain their state of differentiation and infected with SARS-CoV-1. The viral particles (white arrows) are seen in vesicles near normal-appearing lamellar bodies and mitochondria. (courtesy of R Mason, National Jewish Hosp.)

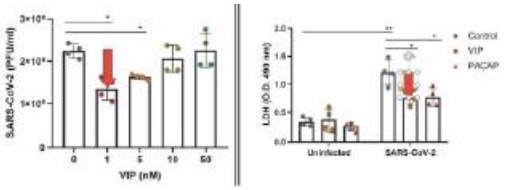


Figure 3: Inhibition ofSARS-CoV-2 replication in human Calu-3 cells incubated with VIP (left) and inhibition of cytopathy in those cells as measured by LDH liberation to the medium (right). Source Temerozo 2020.

Inhibition of Cytokine Synthesis: There is an extensive literature on the role of VIP in blocking cytokine synthesis in the ATII cell and VIP is shown to reduce production of TNFα in both ARDS and Sarcoid. Infected monocytes and Calu-3 cells produce large amounts of IL-6, IL-8, TNFα, and MIF relative to uninfected cells (15,4,12, and 18 times more). Treatment with VIP resulted in 66%, 50%, 66%, and 50% reduction (respectively) in those proinflammatory cytokines in vitro, implying that VIP may offer critical protection to inflamed lungs infected by the coronavirus.

Preservation of Surfactant: If the mechanism of ALI in SARS-CoV-2 infection was driven by cytokine-induced inflammation alone, steroids and other anti-inflammatory drugs might be expected to have some salutary effect. Lung injuries seen in COVID-19 are increasingly recognized as similar to those in premature infants where loss of surfactant, secreted by ATII cells leads to demise of premature infants despite mechanical ventilation. VIP increases the incorporation of methyl-choline into phosphatidylcholine — the major component of pulmonary surfactant — by enhancing the activity of the enzyme choline-phosphate cytidylyltransferase.

Inhibition of Cytopathy: In addition to empirical observations that VIP blocks coronavirus-induced cytopathy, there is a substantial literature which demonstrates that VIP is a proven inhibitor of activation-induced perforin, as well as of granzyme B and therefore actively contributes to the reduction of deleterious proinflammatory and cell death-inducing processes, particularly in the lungs. Caspase-3, has been identified as a key mediator of apoptosis in mammalian cells via its role in cleaving a variety of substrate proteins and inducing DNA fragmentation. In animal models of ALI, caspase activity is significantly increased compared to its activity in normal lungs and VIP is shown to suppress caspase activation.

Supporting Data Suggestive of Biological Effect

Phase 1 and 2 Clinical Data on the use of VIP in Pulmonary Disease

Phase 1 studies in patients with ARDS related to sepsis, a population with less than 50% survival probability, demonstrated clinical improvement in seven of eight patients and long-term survival in six (with the seventh dying from an unrelated myocardial infarction). Additionally, there were meaningful reductions in circulating TNF-α and improvement in blood oxygenation while on ventilator.

Following this acute care finding in phase 1, the sponsor at the time (Biogen) elected to focus on chronic lung disease and initiated phase 2 human studies in sarcoid, pulmonary fibrosis, pulmonary hypertension. Substantial reduction in cough and dyspnea was documented in sarcoid with inhaled aviptadil four times daily. A significant reduction in TNF-α, release from bronchial washing T cells was measured, along with a statistically significant reduction in CD4/CD8 ratio, a well-accepted measurement of immune response. Intravenous safety data is detailed in the IMPD and is on file with the FDA.

In brief, the No Adverse Effect Level as accepted by the FDA is 200µg/kg/day. The doses of aviptadil contemplated in this study are less than 10µg/kg/day, yielding a 20x threshold between the contemplated dose and the lowest possible toxic dose. The IMPD documents numerous safety studies in normal volunteers and efficacy studies in aviptadil has the potential to lower blood pressure and to cause diarrhea, both of which may be dose limiting side effects in some patients but are readily managed in an ICU setting.

Human Trials of ZYESAMI in COVID-19 with Respiratory Failure (COVID-AIV)

We have completed a phase IIb/III randomized controlled trial of ZYESAMI vs. placebo (NCT 04311697), conducted under FDA Fast Track designation (the "Intravenous Trial"). The Intravenous Trial was conducted by NRx Pharmaceuticals, with support from Target Health, LLC, Covance Clinical Services, and Lavin Statistical Associates. Relief Therapeutics funded the cost of the first 144 patients through 28 days of follow-up, representing approximately half of the total costs required to conduct the clinical trial. We funded the balance of the study costs. The Intravenous Trial was originally conceived by us and approved by the FDA as a 28-day clinical trial. "Alive and free from Respiratory Failure at 60 days" (*i.e.,* Recovery from respiratory failure (without relapse) with discharge from acute care and survival through the observation period) was the prespecified primary endpoint specified by FDA. Secondary endpoints included survival through day 60, the mean score on the NIAID severity scale, and median length of hospital stay. Following screening and informed consent, participants were randomly assigned in a 2:1 randomization to receive either three successive intravenous infusions of ZYESAMI or three successive infusions of placebo (normal saline).

In December 2020, prior to unblinding, we recognized thatone-third of the patients participating in the trial were still in the ICU at 28 days and notified the FDA of the need for a 60-day endpoint. The FDA amended its guidance to assess 196 participants to a primary endpoint at 60 days prior to patient-level unblinding. Site of care was added as a covariate after recognition prior to unblinding of disparity in overall mortality between tertiary and regional sites, triggered by the large number of COVID-related (*i.e.,* non drug-related) fatal Serious Adverse Events reports received from regional sites. Upon this recognition, the statistical analysis plan was revised and the FDA was notified. The FDA's February 2021 guidance included a mandate to consider treatment site effects. These data were also shared in confidence with the National Institutes of Health in order to inform the decision of the TESICO investigators who elected a 90 day observation period for determining the primary endpoint.

Statistical significance when used herein is denoted byP-values. The P-value is the probability that the reported result was achieved purely by chance (for example, a P-value Statistical significance when used herein is denoted byP-values. The P-value is the probability that the reported result was achieved purely by chance (for example, a P-value < 0.01 means that there is a less than 1.0% chance that the observed change was purely due to chance). Generally, a P-value < 0.05 is considered to be statistically significant and the basis for concluding that the trial showed an effect. The FDA has not explained how it will determine whether efficacy has been demonstrated in the context of an Emergency Use Authorization request.

As discussed above, in its February 2021 revised guidance, the FDA specified that outcomes of patients with Critical COVID-19 and respiratory failure be measured at 60 days. Therefore, we amended our primary, prespecified composite endpoint to "alive and free of respiratory failure at 60 days," and the key secondary endpoints included survival through 60 days and improvement on the NIAID ordinal scale. The Intravenous Trial enrolled 196 participants and the last participant completed 60 days of observation on February 24, 2021. Across all patients and sites, ZYESAMI met the primary prespecified endpoint for "alive and free of respiratory failure" at day 60 (P = .02) and demonstrated a statistically significant increase in odds of survival through day 60, whether or not the participant was fully recovered (P = < .001), when data were analyzed in a statistical regression model that adjusts for baseline ventilation status and site of care (tertiary vs. regional hospital). A statistically-significant difference in these endpoints was not seen without adjusting for ventilation status or treatment site (regional vs. tertiary care hospitals), as discussed below. To our knowledge, ZYESAMI is the first COVID-19 therapeutic to achieve these results in a randomized, double-blind multicenter trial. Although these results do not provide a guarantee that ZYESAMI will be deemed to be safe or effective for the treatment of COVID-19 and extensive clinical testing and regulatory approval will be required before ZYESAMI can be commonly prescribed for the treatment of COVID-19, on the basis of these findings, we applied for Emergency Use Authorization on May 31, 2021 and plan to submit an application for an NDA.

Two factors in addition to treatment (*i.e.* ZYESAMI vs. placebo) were seen to be statistically-significant in predicting day 60 success: whether the patient was initially treated with High Flow Nasal Oxygen vs. Mechanical or Non-invasive ventilation and whether the patient was treated in a tertiary care medical center vs. a regional hospital. The form of treatment is closely linked to severity of respiratory failure at baseline. The difference seen between outcomes at tertiary vs. regional hospitals may be influenced by the fact that the regional hospitals included in this trial enrolled their participants in the middle of the November 2020 – January 2021 COVID-19 surge and were severely resource constrained with 200% or more ICU overcapacity, staff shortages, and delays in admitting critically ill patients. Thus, the site of care differences observed in our clinical trial may not, in any way, be reflective of the outcomes to be expected from treatment with ZYESAMI if granted broad approval. Analysis of primary endpoint by subgroup was comparable in significance to analysis across all patients and site. Figure 4 provides an illustrative subanalysis.

In addition to the robust overall significance across all 196 treated patients at all 10 clinical sites, the prespecified subgroup analysis of alive and free of respiratory failure is clinically and statistically significant in the 127 patients treated by High Flow Nasal Cannula ("HFNC") (P=.02) compared to those treated with mechanical or non-invasive ventilation regardless of treatment site. In this group, ZYESAMI patients had a 71% chance of successful recovery by day 28 vs. 48% in the placebo group (P = .017) and a 75% rate of successful recovery by day 60 vs. 55% in the placebo group (P = .036). Eighty-four percent (84%) of HFNC patients treated at tertiary medical centers with ZYESAMI survived to day 60 compared with 60% of those treated with placebo (P = .007).

Recovery from respiratory failure (without relapse) with discharge from acute care and survival through the observation period was the prespecified primary endpoint specified by the FDA for the study, originally intended to be assessed at 28 days and then extended to 60 days based on recently-published FDA guidance. The above analysis includes all 196 participants who were randomized and treated in the placebo-controlled, double-blind clinical trial (NCT04311697) conducted at 10 US hospitals. Treatment with ZYESAMI or placebo was in addition to standard of care treatment that included steroids, convalescent plasma, antiviral therapy, anticoagulants, and various anti-cytokine drugs.

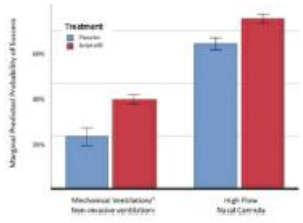


Figure 4: Treatment on likelihood of achieving primary endpoint (alive and free of respiratory failure at day 60) as illustrated by marginal probability of success in logistic regression model.

Effect of Baseline NIAID score on subsequent outcome in ZYESAMI and placebo groups.

A key outcome by which recovery is assessed is the "NIAID Score," which ranges from 8, representing a patient who is at home with no symptoms related to COVID to 1, for a patient who has died. NIAID of 2 or 3 represents a patient in respiratory failure, 4 or 5 represents a patient in the hospital but not in respiratory failure, 6 represents a patient not in acute care (either home or rehab) but requiring oxygen, and 7 represents a patient not in acute care with no oxygen requirement. FDA guidance considers a two-step improvement in NIAID to be clinically significant.

In addition to the pre-specified analyses of primary and secondary endpoint, a secondary analysis was performed using baseline NIAID score as a stratification variable (NIAID 2 vs. 3). Differences in survival for ZYESAMI-treated patients were seen in both the NIAID=2 subgroup (58.6% vs. 0%; LR c^2=10.5, p=.001) and also in the NIAID=3 subgroup (83.1% vs. 62.8%; LRc^2=5.6, p=.03). When daily NIAID scores were split by baseline NIAID score, a significant advantage for ZYESAMI-treated patients was demonstrated independent of site of care among subjects with baseline NIAID scores = 2 (F1,106=4.75, p=.036), with patients on placebo showing primarily a downward trajectory and those on drug showing an upward trajectory (Figure 5). For subjects with baseline NIAID scores =3, across all sites of care, the between group difference over time reaches a trend level of significance (F1,34=4.75, p=.1) with both groups showing mean improvement over time. This difference becomes significant when the subgroup treated in tertiary care hospitals is considered.

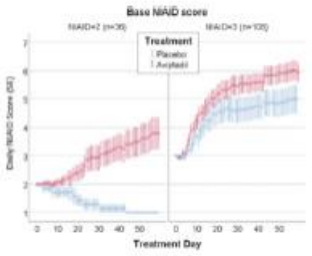


Figure 5: Mean NIAID Score over 60 days stratified by baseline NIAID score.

The Treatment Emergent Adverse Event (TEAE) incidence is shown below for each system organ class and any preferred term with > 5% incidence; through day 28 post enrollment there were no significant differences between treatments overall or for any individual system organ class except for gastrointestinal disorders (two-sided Fisher Exact test p=value = 0.0002). The two specific system organ classes of interest (diarrhea, hypotension) plus infusion site reaction (redness, swelling) are highlighted below as part of all reported categories. More diarrhea was observed for ZYESAMI vs SOC (30.5% vs 1.5%) as was more hypotension (25.2% vs 18.5%). Last, there were more infusion site reactions 7 (5.3%) for ZYESAMI vs 1 (1.5%) for SOC. No unanticipated drug-related Serious Adverse Events (SAEs) including mortality were recorded.

Table 5: Incidence of Adverse Events

	AVIPTADIL		PLACEBO	
	(N=131)	(N=820)	(N=65)	(N=360)
	# Patients	# Events	# Patients	# Events
ANY TEAE	102 (77.9%)	820	49 (75.4%)	360
BLOOD AND LYMPHATIC SYSTEM DISORDERS	18 (13.7%)	21	10 (15.4%)	13
CARDIAC DISORDERS	34 (26.0%)	75	15 (23.1%)	25
EYE DISORDERS	1 (0.8%)	2	1 (1.5%)	1
GASTROINTESTINAL DISORDERS	59 (45.0%)	88	10 (15.4%)	14
Diarrhea	43 (32.8%)	48	1 (1.5%)	1
GENERAL DISORDERS AND ADMIN SITE CONDITIONS	27 (20.6%)	37	13 (20.0%)	15
Multiple organ dysfunction syndrome	9 (6.9%)	9	9 (13.8%)	9
HEPATOBILIARY DISORDERS	4 (3.1%)	4	2 (3.1%)	3
IMMUNE SYSTEM DISORDERS	1 (0.8%)	1	0	0
INFECTIONS AND INFESTATIONS	47 (35.9%)	61	19 (29.2%)	30
COVID-19	22 (16.8%)	22	10 (15.4%)	10
INJURY, POISONING AND PROCEDURAL COMPLICATIONS	12 (9.2%)	15	5 (7.7%)	5
Infusion related reaction	7 (5.3%)	8	1 (1.5%)	1
INVESTIGATIONS	23 (17.6%)	140	8 (12.3%)	65
METABOLISM AND NUTRITION DISORDERS	28 (21.4%)	60	11 (16.9%)	28
Hypokalaemia	16 (12.2%)	16	5 (7.7%)	5
MUSCULOSKELETAL AND CONNECTIVE TISSUE DISORDERS	6 (4.6%)	10	3 (4.6%)	4
NERVOUS SYSTEM DISORDERS	13 (9.9%)	17	8 (12.3%)	10
PRODUCT ISSUES	2 (1.5%)	3	0	0
Device leakage	1 (0.8%)	1	0	0
Device malfunction	2 (1.5%)	2	0	0
PSYCHIATRIC DISORDERS	18 (13.7%)	25	7 (10.8%)	15
Anxiety	6 (4.6%)	6	4 (6.2%)	4
RENAL AND URINARY DISORDERS	36 (27.5%)	43	17 (26.2%)	23
Acute kidney injury	29 (22.1%)	30	14 (21.5%)	15
RESPIRATORY, THORACIC AND MEDIASTINAL DISORDERS	38 (29.0%)	102	25 (38.5%)	62
Acute respiratory distress syndrome	7 (5.3%)	7	2 (3.1%)	2
Respiratory failure	19 (14.5%)	21	11 (16.9%)	13
SKIN AND SUBCUTANEOUS TISSUE DISORDERS	8 (6.1%)	12	3 (4.6%)	10
SURGICAL AND MEDICAL PROCEDURES	2 (1.5%)	2	2 (3.1%)	2
VASCULAR DISORDERS	50 (38.2%)	102	26 (40.0%)	36
Deep vein thrombosis	18 (13.7%)	21	9 (13.8%)	10
Flushing	13 (9.9%)	19	2 (3.1%)	2
Hypotension	34 (26.0%)	44	14 (21.5%)	19
Hypotensive crisis	1 (0.8%)	1	2 (3.1%)	2

Prospective, administratively-controlled trial of ZYESAMI in highly comorbid patients with COVID-19 (High Comorbidity Open Label)

A second administratively assigned open label study of ZYESAMI vs standard of care in 45 patients conducted under an Expanded Access Protocol (NCT04453839) at the Houston Methodist Hospital has demonstrated 9-fold improvement in survival and recovery from respiratory failure in highly comorbid patients (P<0.001). The objective of this study was to determine the safety and efficacy of ZYESAMI in patients with Critical COVID-19 and Respiratory Failure in patients with severe co-morbidity. This study was conducted under FDA emergency use IND and EAP authority.Twenty-one patients were enrolled at Houston Methodist Hospital and compared to 24 concurrent patients who received Standard of Care treatment. No drug-related Serious Adverse Events were reported in association with ZYESAMI. Hypotension was seen in two patients and successfully managed with pressors according to standard ICU protocol without cessation of treatment. Diarrhea was seen in 4 ZYESAMI-treated patients compared to 3 control patients (19% vs. 10%; p=.2).

In this single center trial, a large and statistically-significant difference was seen in likelihood of recovery from respiratory failure in patients treated with ZYESAMI vs. those treated with Standard of Care. These non-randomized data are strongly supportive of the data obtained in the Intravenous Trial and provide additional insight into the use of ZYESAMI among patients whose condition was too severe to be included in the Intravenous Trial.

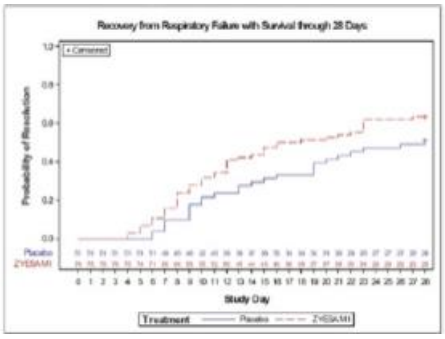


Figure 5A: Recovery from respiratory failure among intubated patients with high levels of comorbidity treated with ZYESAMI vs. placebo.

Further study of ZYESAMI-treated vs. placebo-treated patients on mechanical ventilation will be conducted under the federally-supported I-SPY and ACTIV 3b protocols, which are anticipated to enroll more than 800 patients.

Prospective trial of Inhaled Aviptadil for the treatment of Moderate and Severe COVID-19 (SAMICARE Expanded Access)

The above research focuses on the potential for ZYESAMI to increase the likelihood of recovery and survival in patients who are already in the ICU with COVID-19 respiratory failure, a highly lethal condition. There is reason to believe that the same mechanism by which ZYESAMI achieves a potential benefit in critically-ill patients may be applicable to patients with less severe forms of COVID-19. In this setting, inhaled use of ZYESAMI is more desirable because of the well-understood challenges of maintaining continual intravenous infusions and because of the known occurrence of diarrhea caused by intravenous aviptadil in 30% of patients. We have been awarded IND 151070 by the FDA and has been advised by the FDA that no further nonclinical studies are required for the eventual submission of a New Drug Approval for inhaled ZYESAMI. The FDA has issued a "may proceed" letter for the SAMICARE trial of inhaled aviptadil, to be administered via a hand-held nebulizer in a placebo-controlled trial (NCT04360096). Enrollment in this trial began on April 15, 2021 and is expected to be concluded over six months. The cost of the trial will be approximately $15 million and will be funded by the proceeds of this transaction. The primary endpoint of the trial will be the percentage of patients treated with ZYESAMI vs. placebo who progress to respiratory failure. Secondary endpoints include blood oxygenation, shortness of breath, and distance walked in six minutes (a commonly used measure in respiratory disease trials).

Prospective trial of Inhaled Aviptadil for the treatment of Critical COVID-19 (I-SPY)

There may be a role for the treatment of patients with Critical COVID-19 and respiratory failure with inhaled rather than intravenous aviptadil. This potential use of ZYESAMI will be tested as an arm of the I-SPY platform clinical trial, supported by the US Department of Health and Human Services Biomedical Advanced Research and Development Authority (BARDA). We have signed a Clinical Trial Participation Agreement with Quantum Leap Health Care Collaborative, the sponsor of the I-SPY COVID-19 Trial, and has agreed to contribute $1.5 million towards the cost of the trial. The I-SPY platform is designed to yield phase 2 results, in comparison to the above phase 3 trials. Should a positive finding be identified which suggests that inhaled ZYESAMI is beneficial in patients with Critical COVID-19, we will need to discuss the path to seeking this label indication with the FDA and a second, confirmatory trial might be needed.

Human Case-Control Study of VIP Association with COVID-19 Survival

Plasma levels of VIP are elevated in patients with severe forms ofCOVID-19, compared to normal controls and elevation in VIP is correlated with severity of COVID-19 inflammation (r2 0.16; P<.01; Figure 6, Teremozo 2020) A case-control study was undertaken at the Oswaldo Cruz Institute in Rio de Janeiro in 25 patients with Critical COVID-19 and respiratory failure. VIP levels were correlated in survivors (n=12) vs.non-survivors (n=13) of those who received maximal intensive care with ventilation COVID-19 respiratory failure. A significantly higher level of VIP is documented among survivors (P<.05).

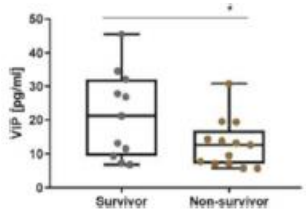


Figure 6: Case control study of VIP levels in survivors vs.non-survivors of Critical COVID-19. A two-fold higher level of plasma VIP was documented in survivors

Non-Clinical Safety Studies of Aviptadil Overview

We have been granted rights to toxicology, clinical pharmacology and pharmacokinetics data assessed in humans and in four other species by Relief Therapeutics. These nonclinical data have been deemed by the FDA in written communication to be sufficient to support an NDA.

Relief's predecessor company, Mondo Biotech undertook development of aviptadil in partnership with Biogen, Inc. and took joint advice from the FDA and EMEA. Three Type B meetings were conducted with the FDA between 2006 and 2010, which resulted in a complete package of nonclinical studies produced in four species (mice, rats, dogs, and primates) to support intravenous and inhaled use of aviptadil. Those studies, which have been filed under FDA IND 149,152 include pharmacokinetics, pharmacodynamics, safety pharmacology (cardiovascular), acute toxicity, repeat dose toxicity, reproductive toxicity, and local tolerance. The FDA has agreed in writing that all NDA-clearing non-clinical studies have been performed and has agreed to accept the non-clinical data on a rolling basis in advance of clinical safety and efficacy data.

Acute Respiratory Distress Syndrome

Open Label Dose Escalation Study

The objective of this Phase I study is to obtain preliminary data, in an open-label study, on the safety and efficacy of IV infused Aviptadil in patients with ARDS complicating sepsis.

The trial was conducted in patients with ARDS complicating the sepsis syndrome. Such patients may or may not have evidence of other organ dysfunction. Although a window of 24-48 hours often exists from the time sepsis/septic shock is diagnosed until severe lung and other organ injury occurs, organ injury may develop rapidly and some degree of lung injury may already be present when sepsis is first diagnosed. By limiting the study population to patients with antecedent or associated sepsis/septic shock excluding those with other risk factors for ARDS such as trauma, drug overdose, acid aspiration, and inhaled toxins, the study group was expected to be more homogeneous and well defined.

All patients entered into this trial had the diagnosis of ARDS in the setting of the sepsis syndrome, by recent consensus definitions. Patients were to be observed for a 24-hour period, during which time all inclusion criteria had to be met. If all criteria had been met once (not necessarily simultaneously), the patient was enrolled, and received the study drug within 12 hours of the entry criteria being fulfilled.

Main inclusion criteria were:

- Sepsis / septic shock
- ARDS
- Hypotension
- Inadequate organ perfusion or function

In the lower dose group with 50 pmol/kg/hr (5 patients), Aviptadil administration was stopped in one (bronchial obstruction due to hypersecretion considered to be unrelated to Aviptadil) and the dose halved in another (Hypotension). In a third case the administration was stopped early in order to keep some of the IV solution for analysis.

In the high dose group with 100 pmol/kg/hr (3 patients) Aviptadil administration was stopped in none. However, dose was transitorily reduced in two, due to hypotension (1 case) or to bigeminy (1 case).

Critical COVID-19 with Severe Comorbidity Expanded Access (High Comorbidity Open Label)

Open label Expanded Access Protocol NCT04453839

Through date of submission, 300 patients have been enrolled in this expanded access study of Critical COVID-19 with respiratory failure in patients with severe comorbidity who do not qualify for NCT04311697. To date, no drug-related Serious Adverse Events have been reported. This is not a prospective trial in that there is no comparison group. However, the safety information collected will become part of ourdrug safety database and the efficacy endpoints identified might be viewed as supportive in a future FDA filing based on the randomized controlled trials discussed above. Seventy percent (70%) survival has so far been observed though 28 days, which is comparable to both drug and placebo survival seen in the phase IIb/III trial. Additional data from the Expanded Access Protocol have not yet been analyzed. This activity is being conducted by NRx Pharmaceuticals. As an Expanded Access Protocol, it is an FDA-recommended activity conducted during phase II/III. The only endpoints being collected are survival and freedom from respiratory failure at 60 days. However, there is no comparator arm of the study. Therefore, these data are expected to contribute to the safety database for ZYESAMI, but not to provide primary evidence of efficacy. Thus far, one IND safety report has been filed with FDA related to a patient who developed metabolic acidosis in association with diarrhea after being treated with aviptadil. The metabolic acidosis were treated without further sequelae.

Product Development and Manufacturing

Product Image/ Treatment Kit Definition

In IV form, ZYESAMI will be administered as three 12-hour intravenous infusions, on three successive days. Each ZYESAMI Treatment Kit ("3-pack") will consist of three sterile 5ml glass vials of aviptadil, 100µg/ml with a validated crimp seal container closure system that is serialized and registered to a single patient as part of the Risk Evaluation and Management Strategy to be implemented by us. Each treatment kit will contain plastic-embossed pharmacist weight/dosing tables. The infusion is delivered to the patient via a standard IV infusion pump found in every US hospital.

Dosing tables in the NRx Pharmaceuticals pharmacy manual document that the dose to produce 100 pmol/kg/hr is .333µg/hr. This represents the intermediate dose used in the ongoing phase 2/3 trial. Thus, 280µg of API is required for a 12-hour infusion in a 70 kg patient. We will supply 5ml vials, containing 500µg of aviptadil acetate in 5ml 0.9% NaCl (*i.e.*, 100µg/ml).This treatment kit may not provide sufficient drug for all patient weight categories at all doses. However, we will provide a 100% rebate on any kit that is used to provide supplementary drug product to a patient whose weight is such that adequate drug substance cannot be obtained from a single treatment kit.

We have collaborated with Nephron Pharmaceuticals, Inc. (West Columbia, SC) to initiate scaleup of ZYESAMI 100µg/ml in saline. At current production capability, we can supply 10,000 patient courses of treatment per month. In addition to our supply of drug substance from Bachem Americas, we have now contracted with the Polypeptide Group (Torrance, CA) to supply aviptadil acetate (the drug substance or active pharmaceutical ingredient used to manufacture ZYESAMI) in substantially larger quantities. As used below, BOC and FMOC refer to different synthetic chemical paths in peptide synthesis. The BOC manufacturing process at Bachem Americas is limited to 120 grams of drug substance per month (approximately 60,000 patient treatment courses). The BOC process is also constrained by the use of hydrofluoric acid, a compound with deleterious environmental effects, the use of which is constrained by the US Environmental Protection Agency. We have implemented development of the FMOC process in partnership with the Polypeptide Group. The FMOC process does not rely on hydrofluoric acid and yields production quantities of between 1KG and 5KG at substantially lower cost, thereby removing supply of drug substance as a material constraint.

Source and Manufacture of Drug Substance

A Drug Master File has been established with the FDA by Bachem Americas to which we have been granted Right of Reference. We contracted with Bachem Americas to supply 1 KG of aviptadil during the first quarter of 2021. We have additionally contracted with the Polypeptide Group to supply FMOC-processed material starting in the second quarter of 2021. Both forms of aviptadil drug substance are the same acetate salt. The Polypeptide Group's material has not yet been qualified by the FDA for human use and this qualification is anticipated as part of our NDA for ZYESAMI. We have contracted with the Polypeptide Group for the first 1 KG batch of aviptadil and the first 1 KG batch has been released to us.

Basis for Formulation and Initial Stability

Currently, Aviptadil is supplied in normal saline for human use and, in this form, has demonstrated clinical benefit in open-label studies (Figure 7). Substantial time and resources have been invested in an improved formulation for aviptadil. The inventor, Dorian Bevec, MD, a former consultant to our Company, led the inhaled use trials for sarcoid, asthma/allergy, and pulmonary hypertension, and observed the intravenous phase I trial. However, the lyophilized formulation that includes Polysorbate 80, sucrose, and mannitol is believed to result in peptide aggregation and was abandoned by Mondo Biotech in 2009. Addition of citrate buffer and EDTA causes decrease potency and purity by 28 weeks.

As of June 9, 2021, Relief Therapeutics has not invested in the commercial cGMP formulation of ZYESAMI required for regulatory approval and commercialization. Further, Relief Therapeutics has not provided any information to us that would lead to a stable cGMP formulation.

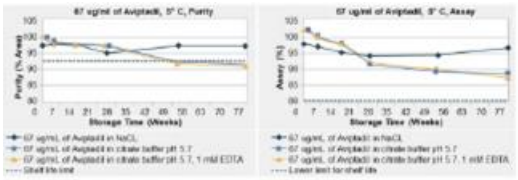


Figure 7: Purity and potency of aviptadil in saline vs buffer systems over 18 months

Bachem's stress test data on aviptadil stated that aviptadil in saline is stable for at least 77 weeks at 5°C (Figure 7). These data were not successfully replicated by NRx Pharmaceuticals using modern, validated chromatography techniques at two different cGMP manufacturers. In January 2021, we advised Relief Therapeutics that it was abandoning the RLF-100 formulation approach and embarking on a new approach in conjunction with Nephron Pharmaceuticals, Inc. (West Columbia, SC) and Nextar, LTD (Nes Tziona, Israel) in order to develop a long-term stable liquid formulation of ZYESAMI. NRx Pharmaceuticals and Nephron Pharmaceuticals believe that the mechanism by which aviptadil rapidly degrades in solution has been identified and formulation, manufacturing, and container closure innovations have been developed to counter this degradation. As of June 15, 2021, NRx Pharmaceuticals has initiated GMP manufacturing of ZYESAMI™ and anticipates a long-term stable formulation that will have the potential to be stockpiled should ZYESAMI™ be deemed safe and effective by the FDA.

We have additionally entered into a Feasibility Study and Material Transfer Agreement with TFF Pharmaceuticals, Inc. ("TFF") in order to explore a "Thin Film Freezing" approach to developing a long-term stable product that might be directly suitable for inhalation as well as providing long term stability for reconstitution as a liquid product.

Our stockpile approaches, which may include freezing at -70°C, may include a lyophilization approach that does not lead to peptide aggregation, or other more modern vehicles that have been developed for short peptides. Extensive stress testing at various temperatures and concentration will be performed as part of our manufacturing scale-up plan development. However, there can be no guaranty that such techniques will be successful and we may be forced to market forms of its drug with 90 day or shorter expiration dates while longer term stable product presentations are developed. In this event, profitability of the product may be impaired as a function of supply chain costs and the requirement to accept returns of outdated product from end-users.

CNS PRODUCT PORTFOLIO: Acute Suicidal Ideation and Behavior in Bipolar Disorder

Background of the CNS Portfolio

Our CNS portfolio is based upon fundamental scientific discoveries of Professor Daniel C. Javitt, PhD, MD, a Professor of Psychiatry at Columbia University and co-founder of NeuroRx. In 1987, Javitt discovered the role of blocking the brain's NMDA receptor (a molecule on the surface of brain cells) in producing psychosis. The discovery was made in the context of attempting to determine the molecular mechanism by which phencyclidine (angel dust: a once popular drug of abuse frequently added to cannabis) caused acute psychosis in a high proportion of users. Javitt discovered that phencyclidine exerted its psychotogenic action by blocking the NMDA receptor and devoted the balance of his ongoing career to studying the brain chemistry of schizophrenia, depression, and related disorders. Javitt is one of the most widely published scientists in molecular psychiatry.

About 10 years after Javitt's original discovery, it was learned that NMDA inhibition is the mechanism by which ketamine, dextromethorphan, and other NMDA antagonists exert their antidepressant effects. Javitt subsequently made the seminal observation that when an NMDA antagonist, specifically DCS, is combined with a traditional (serotonin-targeted) antidepressant or antipsychotic, the two drugs have a synergistic effect wherein antidepressant activity is enhanced and side effects are decreased. Javitt explicated the mechanism of this synergy in multiple non-clinical models. The discovery has led to a broad patent portfolio now owned by us and to the development of NRX-101, the first investigational human drug targeting suicidal depression.

NMDAR-based treatment for bipolar depression

NRX-101 is a dual-targeted sequential therapy (the "NRx Pharmaceuticals Sequential Therapy") consisting of an initial treatment with NRX-100 (IV ketamine) followed by 6-week treatment with NRX-101 (combined DCS and lurasidone). The treatment is intended for rapid stabilization of individuals with acute suicidal crisis related to acute exacerbation of depressive symptoms in individuals with bipolar disorder, followed by longer term stabilization to permit resolution of the crisis. The drug is intended for treatment of both depression and acute suicidal ideation and behavior ("ASIB") in individuals with an acute depressive decompensation in Bipolar Disorder.

Background on the indication

Bipolar Disorder, formerly known as manic depressive disorder, is a well-established psychiatric diagnosis with a lifetime prevalence of 4.4% in adults in the United States. The risk of ASIB is uniquely high in patients during bipolar depressive episodes, compared to those with MDD, thought disorders, and personality disorders. Lifetime suicide behavior occurs in 25% to 56% of people with bipolar depression. About 40% of the nearly 50,000 annual deaths from suicide in the United States are associated with bipolar depression. Patients with bipolar

depression are 20-30 times more likely to attempt suicide than the general population. Over the course of 5 years, 1 in 5 patients suffering from bipolar depression will attempt suicide. The overall rate of death by suicide among bipolar patients is 164 per 100,000 person-years, approximately 10-fold greater than the general population. Those who have attempted suicide are 2.3 times more likely to die by suicide than any other method. Thus, ASIB in bipolar depression has uniquely lethal clinical characteristics.

Current Treatment Options for ASIB in Bipolar Depression

Despite its lethal characteristics, there are no approved pharmacologic treatments for patients with ASIB in bipolar depression. As a result, ECT, often combined with inpatient psychiatric care, remains the only FDA-approved treatment for patients with ASIB in bipolar depression, despite ECT's well-documented side effects that include memory loss and confusion, along with its high cost. In recent years, several combined D2/5-HT2a antagonists have been shown to have efficacy in treating bipolar depression (olanzapine/fluoxetine combination, quetiapine, and lurasidone) with treatment guidelines endorsing common use as first-line standard-of-care treatment in acute bipolar depression. While these medications are effective at reducing overall symptoms of depression, they do not specifically reduce suicidal ideation, as shown in recent clinical trials of lurasidone. Moreover, in these two studies, individuals with active suicidal ideation (Montgomery Asberg Depression Rating Scale, MADRS item 10 ³ 4) were specifically excluded because of concerns regarding the possibility of exacerbating suicidality with these medications. Similarly, acutely suicidal patients are routinely excluded from clinical trials of other experimental anti-depressive agents. Thus, ASIB in bipolar depression represents a major unmet medical need that must frequently be treated with voluntary or involuntary hospitalization under highly supervised conditions and ECT.

Whereas all approved drugs for depression act primarily through monoaminergic mechanisms, the serendipitous discovery that ketamine has a rapid and profound effect on depression and suicidality led to the realization that the glutamate system and the N-methyl-D-aspartate receptor ("NMDAR") may also play an important role in depression and suicidality. In this study, acutely suicidal and depressed bipolar patients will receive a single low dose of IV ketamine to determine clinical response. For patients who respond with an acute improvement of suicidality and depressive symptoms, the investigational product ("IP") will be taken orally twice daily for up to six weeks to determine ifNRX-101 may prolong the resolution of depressive symptoms and time to clinical relapse.

Rationale for Developing NRX Sequential Treatment

NRX-100, an IV infusion of ketamine to induce acute response, is taken in conjunction withNRX-101, a fixed-dose combination oral capsule composed of DCS and lurasidone to maintain remission from acute suicidality in acutely depressed bipolar patients. The NRx Pharmaceuticals Sequential Therapy takes advantage of the unique synergistic confluence of three FDA-approved drugs with long histories of safety: DCS, lurasidone and ketamine.

DCS is a broad-spectrum antibiotic approved for the treatment of tuberculosis (Seromycin, or Cycloserine). DCS has been used in millions of individuals without report of significant safety concerns. Its antidepressant effects were first noted as a serendipitous observation in individuals with co-morbid tuberculosis and depression receiving high-dose DCS treatment for anti-tuberculosis therapy and subsequently confirmed in a prospective investigation. However, these were not pursued further at the time because of the liability of DCS to induce significant psychotomimetic side effects when given at high dose. The interaction of DCS with the NMDA receptor was first demonstrated in 1989, leading to some interest in NMDAR blockers as potential antidepressant treatments. For example, both DCS and the related compound ACPC were shown to be active in mice, using the forced swim test for depression.

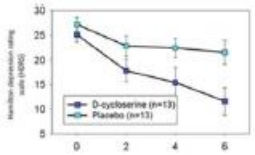


Figure 8: Effect of DCS on persistent depressive symptoms in MDD, when added to existing anti-depressants

High-dose (>500 mg) DCS was subsequently shown to reduce persistent depressive symptoms in patients with MDD despite adequate treatment with approved antidepressant agents. A slow DCS titration was used, with 250 mg/d X 3 days, followed by 500 mg/d for 18d (*i.e.*, until end of week 3); followed by 750 mg/d for 1 week (*i.e.*, until end of week 4), followed by 1000 mg/d (*i.e.*, until end of study). In the study (Figure 8), significant beneficial effects were observed in 13 subjects vs. placebo control with SSRI-nonresponsive depressive symptoms. The improvements were manifest within two weeks and persisted throughout the six-week treatment period. These data suggest a >0.9 effect size. Statistical separation between groups was observed by end of week 4, *i.e.*, within 1 week of initiation of a dose >500 mg/d. An unexpected finding of the study was that psychotomimetic effects of combined DCS and antidepressants were minimal, suggesting unexpected synergy between the two components of the treatment.

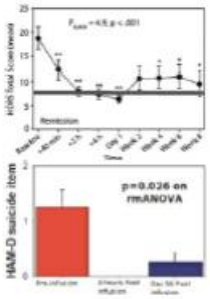


Figure 9: Effect of sequential ketamine and DCS treatment in acutely presenting bipolar depression patients receiving ongoing treatment with an atypical antipsychotic approved for treatment of bipolar depression. Top: Effect on depression ratings using the Hamilton Depression Rating Scale (HDRS, HAM-D). Bottom: Effect on suicidality as rated using theHAM-D suicidality item.

Lurasidone is an atypical antipsychotic with approval for the treatment of depressive episodes associated with bipolar depression in adults as a monotherapy and as an adjunctive therapy with lithium or valproate. Of the drugs in its class, lurasidone requires the lowest treatment dose and demonstrates the fewest side effects.

Ketamine HCl is a dissociative, rapid-acting general anesthetic for IV or intramuscular injection, approved for surgical anesthesia. Ketamine has a wide margin of safety. Its use for more than 12,000 types of operative and diagnostic procedures has been studied in over 10,000 subjects participating in 105 separate clinical studies. Ketamine has been shown in multiple randomized clinical trials to induce nearly immediate remission from depressive symptoms and also from suicidal ideation. However, the clinical effect has been demonstrated to diminish three days post-dose when used intravenously and 2 days post dose when the S-enantiomer is delivered intranasally.

Whereas ketamine is a direct NMDA channel blocker, which binds to the phencyclidine binding site, DCS in high doses has an NMDA-antagonist effect mediated through interaction with the glycine binding site. This effect is apparently unrelated to its properties as an anti-infective. By combining the potential of DCS to extend the anti-depressant effects of ketamine with the antipsychotic properties of lurasidone, the NRx Pharmaceuticals Sequential Therapy has the potential to stabilize individuals with bipolar depression during acute crisis and address a serious medical need.

NRX-100 (ketamine HCl, 0.5 mg/kg IV over 40 minutes) has been shown to induce acute reductions in suicidality and depression in patients with bipolar depression, relative to control. Numerous reports have documented a 50% reduction in the MADRS and a 75% reduction in suicidality following a single infusion of ketamine in patients with suicidal ideation and depression. While the repeat use of ketamine is not supported and may be contraindicated by the literature, DCS, when combined with Selective Serotonin Reuptake Inhibitor (SSRI) antidepressants in patients with treatment resistant depression, and when combined with atypical antipsychotics, in particular lurasidone, has shown separation from control and ability to maintain remission from suicidality and depression over 6 weeks with oral use (Figure 9).

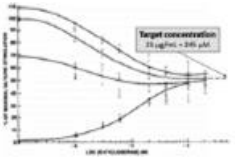


Figure 10: Inhibition of NMDAR activity by DCS in the presence of glycine.

Preclinical observations

Cross-species translation of DCS effect is based upon plasma level, such that NMDAR antagonist effects are observed consistently at plasma levels >25 µg/ml (~250 µM) (Figure 10). This plasma level is achieved in rodents with doses >30 mg/kg and in humans with doses >10 mg/kg. Evidence for functional target engagement at these doses comes from 1) rodent behavioral studies, 2) clinical studies of DCS in schizophrenia, and 3) clinical studies of DCS in depression.

Effects of DCS on NMDAR activation were first evaluated in 1990 by Hood et al., 1989 who noted inhibition of NMDAR activation by DCS at doses similar to our proposed active dose. These effects were subsequently confirmed by Watson et al., 1990, and the issue of high-dose antagonist effects of DCS were extensively discussed by Lanthorn et al., 1994.

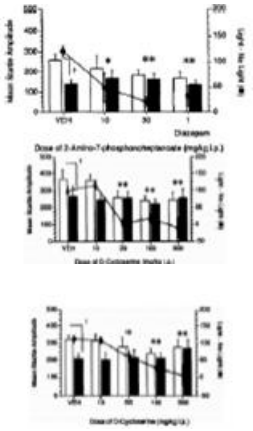


Figure 11: Effects of the NMDAR antagonist AP7 (top panel) and DCS (bottom 2 panels) on fear-induced startle, showing similar effect of the 2 agents, and effective doses of DCS at >30 mg/kg.

The majority of rodent behavioral studies conducted with DCS used doses of DCS of 30 mg/kg produced significant dose-dependent anxiolytic effects in the fear-potentiated startle assay (Figure 11 middle and lower) that were similar to those produced by the known NMDAR glycine-site antagonist 7-chlorokynurenate. The authors state as follows: "*...the results of the present study show that D-cycloserine exhibits anxiolytic activity at higher doses, an effect consistent with antagonist activity,*" and also argue for potential effectiveness of DCS in treatment of anxiety- and fear-related disorders including generalized anxiety disorder or PTSD.

Human PK of DCS

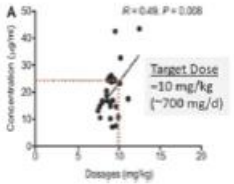


Figure 12. PK of DCS during treatment of TB. From Hung, et al. 2014

The PK of DCS in humans is well known based upon its long-standing use in the treatment drug-resistant TB. For example, Hung et al., 2014 evaluated plasma levels during treatment with different TB doses (Figure 12). As shown, clinical doses of 10 mg/kg (*i.e.*, ~500-1000 mg depending upon body weight) produce plasma levels of ~25 µg/mL, which is the target dose in our development program. It is also known that DCS readily cross the blood-brain barrier and is found in cerebrospinal fluid (CSF) at concentrations similar to those observed in plasma.

Based upon animal data, we predict that DCS will have significant anti-NMDAR effects in humans at doses >500 mg, which correspond to doses that produce plasma levels >25 µg/mL.

NRX-101 Safety

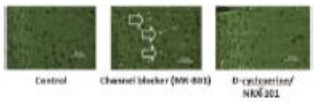


Figure 13: Rodent neurotoxicity study showing "Olney lesions" induced by the NMDAR channel blocker MK-801 (light green regions). No significant neurotoxicity was observed for DCS. Source:

A major concern with use of agents that block the channel site of the NMDAR is their propensity to induce neurotoxicity within frontal brain regions ("Olney" lesions). This propensity for neurotoxicity has been observed with direct channel-blocking NMDAR agents, but has not been observed with any glycine-site modulator, such as NRX-101. The concern regarding neurotoxicity has caused FDA to issue new guidance for the development of NMDAR-targeted antidepressants, requiring neurotoxicity studies, according to FDA-agreed protocols. This element of NMDAR-targeted antidepressant use may become increasingly relevant in coming years, because drugs containing ketamine and dextromethorphan, two molecules with known neurotoxic potential in humans have been proposed for repeated administration in the treatment of depression.

We took advice from FDA in 2016 and conducted a rodent neurotoxicity study according to a protocol agreed in advance between FDA and NRx Pharmaceuticals. The combination of the drugs for the NRx Pharmaceuticals Sequential Therapy (DCS, lurasidone, and ketamine) were tested according to this protocol and found to have no evidence of neurotoxicity (Figure 13) demonstrating safety factors of 4-fold, 16-fold and 7.4-fold for ketamine, DCS, and lurasidone, respectively. Each of the proposed drugs has a long history of safe use in humans, and their adverse event (AE) profiles are well characterized.

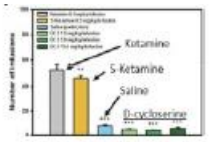


Figure 14. Relative effects of DCS and ketamine on rodent self-administration, showing a significant difference between ketamine and DCS, and no significant difference between DCS and saline. Source: Psychogenics, Inc.

Direct channel-blocking NMDAR-targeted antidepressants have shown substantial propensity for addiction and abuse liability, a propensity that has not been seen with glycine site modulators. This propensity may be related to theories that have been advanced indicating that such agents also bind to opiate receptors. DCS has also been investigated in a drug-abuse liability assay using intravenous self-administration. Both ketamine and S-ketamine are known to have significant abuse liability and support self-administration in rodents. Substantial abuse liability is also known in association with dextromethorphan. We conducted a rodent abuse liability study in which, the relative abilities of ketamine, S-ketamine and DCS to support self-administration were investigated in animals trained to self-administer ketamine (Figure 14). As expected, both ketamine (gray bar) and S-ketamine (yellow bar) significantly replaced ketamine, consistent with high clinical abuse potential. DCS did not significantly replace ketamine in this assay, consistent with lack of reported clinical use despite >50 years of clinical use.

NRx Pharmaceuticals Sequential Therapy (NRX-100 Followed by NRX-101) for the Treatment of Acute Suicidal Ideation and Behavior in Bipolar Depression: the STABIL-B Study

An initial study was conducted to confirm the selected dosing levels for DCS and lurasidone and evaluate the NRx Pharmaceuticals Sequential Therapy approach. The study enrolled patients with severe bipolar depression and acute suicidal ideation and behavior. Severe depressive symptoms as defined as a score of 30 or higher on the Bipolar Inventory of Symptoms Scale (BISS) derived MADRS score (BDM). Active suicidal intent with or without plan, was defined as a score of 4 or 5 using the Columbia Suicide Severity Rating Scale (C-SSRS). In Stage 1, all subjects received treatment with a blinded infusion of ketamine (0.5 mg/kg) or saline. Response to Stage 1 was defined as 25% improvement in BDM, and C-SSRS ☐3. Responders to Stage 1 were entered into a 6-week double-blind comparison study of NRX-101 vs. lurasidone alone. The objective of the study was to demonstrate significant superiority of NRX-101 vs. lurasidone alone for maintenance of improvement and prevention of relapse following initial successful IV ketamine treatment.

Dosing: Target doses were used of 950 mg for DCS and 66 mg for lurasidone. Both compounds were titrated upwards over the initial 5-d of treatment. Flexible dosing was permitted to allow dose reduction for side effects, or dose increases for agitation.

Endpoints: The primary endpoint consisted of relative change in depression (BDM) score between NRX-101. Secondary endpoints included suicidality, as reflect in both C-SSRS score and clinician-rated global suicidality impression score (CGI-SS) and relapse.

Study results (figure 15):

Stage 1: Twenty-two (22) subjects entered Stage 1. Seventeen (17) were assigned to IV ketamine (NRX-100) and 5 to saline. All subjects showed significant response to treatment and were entered into Stage 2.

Stage 2: Data were analyzed for the 17 subjects who responded to IV ketamine in Stage 1. These subjects were randomized to either NRX-101 (n=12) or lurasidone along (n=5). Sequential treatment with ketamine/NRX-101 significantly reduced depression symptoms compared to sequential treatment with ketamine/lurasidone alone (p=.032) in a last-observation carried forward (LOCF) analysis. In a parallel MMRM analysis, a statistical difference of p=.09 was observed between groups. In addition, there were no relapses during NRX-101 treatment (0/12, 0%) vs. 2 relapses in the lurasidone alone group (2/5, 40%). The between-group significance level of p=.0735 was not significant but showed feasibility of detecting a difference with larger samples given a similar response pattern.

In LOCF analyses of secondary endpoints, a significant between-group difference was also observed both for suicidality score(C-SSRS) (p=.02) and for clinical-rated global impression of suicidality (CGI-SS) (p=.019). These findings suggest clinically noticeable between-group differences in liability for return of suicidality following initial ketamine treatment. Both effects were non-significant (p =.11; p=.15) on MMRM analysis.

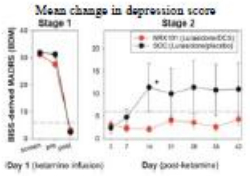


Figure 15: Change in depression (BDM) score during Stage 1 and Stage 2 of theSTABIL-B study. All subjects improved significantly in Stage 1. In Stage 2, subjects assigned to NRX-101 showed no significant worsening of depression, or reversion toward pre-Study 1 baseline. By contrast, significant worsening was observed in the lurasidone alone group. The mean difference in BDM score through day 42 was 7.7 points (p=.032 between groups), which was considered a statistically large effect (d=1.60). Source: NRx Pharmaceuticals, unpublished data.

No significant treatment-related safety issues were observed in either group, and no deaths were reported in the study. Plasma DCS levels achieved during the study were within the range expected based on prior human PK studies.

Study interpretation

Overall, these results support continued development ofNRX-101 for maintenance of clinical benefit in both depression and suicidality following initial successful treatment with IV ketamine. Significant between group differences were observed on LOCF analysis for both depressive symptoms, which was the prespecified primary endpoint, and for suicidality, which was a pre-specified key secondary endpoint. For suicidality, significant LOCF differences were observed not only for formal suicidality ratings, but also for clinical impression, suggesting clinically meaningful effect.

Although the differences were not significant in MMRM analyses, the magnitude of between-group differences suggested that a sample size of 72 subjects would be sufficient to achieve clinical significance given similar magnitude of effect. In addition, the study supported feasibility of the sequential NRX-100/NRX-101 treatment approach and supported continued use of the combined DCS/lurasidone formulation.

Ongoing Phase III clinical trial

An ongoing study is investigating effects of NRx Pharmaceuticals Sequential Therapy with IV ketamine (NRX-100) following by combined DCS + lurasidone (NRX-101) vs. ketamine-lurasidone alone. This study uses a more rapid titration schedule for DCS than was used inSTABIL-B, which permits proposed therapeutic dosing levels to be obtained more rapidly. Otherwise, study methodology remains similar. The objective of the study is to replicate findings from both the Kantrowitz et al., 2015 study and STABIL-B trial showing rapid remission of symptoms on initial ketamine treatment, followed by maintained improvement throughout the 6-week NRX-101 treatment period. The primary hypotheses are thatNRX-101 will be superior to lurasidone alone in maintenance of remission following initial successful ketamine treatment, as reflected both in a significant between-group separation on depression and suicidality scores as rated by the MADRS and C-SSRS scales, and in prevention of clinician-rated relapse.

The study is being conducted under a Special Protocol Agreement (SPA) with FDA, and the treatment has been granted breakthrough status. The study will enroll 72 subjects ages 18-65 who will be randomized 2:1 toNRX-101 vs. lurasidone. It is presently implemented at 4 treatment sites. Recruitment was halted in February 2020 due to concerns about COVID-19. We anticipate resumption of enrollment in the 1st quarter of 2021.

Clinical Objectives

Our clinical objective is to offer patients the clinical benefit of rapid reduction in symptoms of depression and suicidal ideation that has been observed with intravenous ketamine, while maintaining that benefit with a daily oral agent that does not have ketamine's potential for abuse and psychosis. NRX-101 is designed to offer an oral, rapid-onset and sustained home-use therapy that can significantly extend ketamine's proven anti-suicidal benefit and reduce the side effects of ketamine.

We believe that NRX-101 possesses potential development advantages over competing solutions, including:

- ***Initial focus on bipolar depression.*** Competitors' pipeline products are focused on MDD and exclude bipolar patients from clinical trials.
- ***Use of non-toxic pharmaceutical ingredients for oral therapy.*** Ketamine and other NMDA blocking drugs are well-known to have the potential to cause brain cell death when abused (*i.e.* Olney Lesions) and recent FDA guidance requires that proposed NMDA-targeted antidepressants prove the lack of neurotoxicity on histological studies. We have demonstrated that even at systemically-toxic doses of DCS in non-clinical subjects, no neurotoxicity is seen.
- ***Lack of hallucinations and vomiting with NRX-101.*** Ketamine has been associated with hallucinations and other dissociative side effects in numerous clinical studies and, in its nasal form, a 20% incidence of vomiting. These side effects have not been seen in initial human studies of NRX-101.
- ***Lack of habituation and addiction.*** Ketamine is a DEA schedule 3 controlled substance and known to be highly addictive. We have conducted industry-standard habituation studies which show no addiction potential for NRX-101 and there is no history of abuse of DCS in more than 60 years of human use.

NRX-102

The majority of patients with depression have MDD and PTSD, as opposed to bipolar depression. Whereas episodes of depression in bipolar disorder are episodic and tend to resolve in two to three months, depression is a chronic feature of MDD and PTSD. NRX-102, which involves a fixed dose combination of DCS with Mirtazapine, a currently-approved antidepressant. In the 2013 phase 2 study, clinical data demonstrate the potential efficacy of DCS in combination with SSRI antidepressant versus an SSRI antidepressant alone in treating patients with treatment-resistant MDD.

As a follow-on to NRX-101, we plan to pair DCS with Mirtazapine, (one of the SSRI antidepressants evaluated in the phase 2 study) or its isomers in a fixed-dose combination. We expect to continue the preclinical development of NRX-102 in the first half of 2021. Further, we have identified additional 5-HT2A antagonists that may be appropriately paired with DCS for Development of NRX-102 is further guided by preclinical data disclosed in our patents and publications which demonstrates that DCS may inhibit the akathisia induced by SSRI antidepressants.

NRX-201/202

Existing clinical data have shown DCS to be a useful initial therapeutic agent with which to target the glycine site on the NMDA receptor. However, DCS has mixed agonist/antagonist effects and its antagonist properties are only manifest at high doses of DCS. We have identified other small molecule NMDA antagonists that are effective at lower doses and may be paired in a 1:1 molar ratio with 5-HT2A antagonists in order to yield a dual-targeted pro-drug. Accordingly, we are engaged in initiating medicinal chemistry and rationale design initiatives in order to develop candidate prodrugs that will expand on the dual-targeted properties of NRX-101 and 102.

NRX-201/202 will target bipolar depression and MDD/PTSD, respectively, and are anticipated to replace the DCS component of NRX-101/102 with a molecule that is more specifically targeted than DCS at the same glycine site target. Our patent portfolio includes issued and pending claims for many such dual-targeted combinations.

Manufacturing and Distribution

We have partnered in the United States with Nephron Pharmaceuticals and in Israel with Nextar, LTD to manufacture our drug. Both are qualified cGMP manufacturers, inspected by the US FDA and, in the case of Nextar, by EMEA and the Israel Ministry of Health as well). We have also signed a contract with Cardinal Health (as defined below) to distribute our product nationwide.

Summary of NRx Pharmaceuticals Material In-licensing Obligations

NRX-100/101

Glytech Development and License Agreement

We have entered into a Development and License Agreement with Glytech, dated May 2, 2016, which amended and restated an earlier agreement dated August 6, 2015, and which was further amended on four occasions by written agreements dated October 19, 2016, June 13, 2018, April 16, 2019 and December 31, 2020 (such agreement and all of its amendments, collectively, the "Glytech DLA").

The License

Pursuant to the Glytech DLA, Glytech granted to NRx Pharmaceuticals an irrevocable, perpetual, exclusive (even as to Glytech) royalty-free license, with the right to sublicense, to use the Licensed Technology (defined below) to develop, manufacture and offer for sale drug products for the treatment of depression and suicide associated with bipolar disorder in humans, including all products containing (a) DCS (including metabolites and structural variants thereof) combined with an antidepressant agent or an antipsychotic agent (including but not limited to lurasidone), or (b) DCS (including metabolites and structural variants thereof) for treatment of all types of bipolar, depressive and/or anxiety disorders and/or symptoms thereof ("Glytech License"). The key composition of matter patent (U.S. Patent No. 10,583,138) that supports NRx Pharmaceuticals was assigned to us by Glytech in January 2021 and is no longer the subject of a license grant under the Glytech DLA; and (2) Glytech agreed to transfer and assign the remainder of the Licensed Technology and the Excluded Technology (defined below) which are not essential for the manufacture or sale of NRX-101 – to NRx Pharmaceuticals for no additional consideration at any time upon receipt of written notice from us if, on or prior to August 6, 2022, (i) the value of the Glytech equity holdings in NRx Pharmaceuticals (the "Glytech Equity") has an aggregate liquidity value of at least $50 million for twenty (20) consecutive trading days immediately preceding any given date and (ii) there are no legal or contractual restrictions on selling all of the securities represented by the Glytech Equity then applicable to Glytech (or reasonably foreseeable to be applicable to Glytech within the following twenty (20) trading days).

Glytech also agreed to transfer and assign the Licensed Technology and the Excluded Technology to us for no additional consideration simultaneously with the closing of a merger, acquisition or other transaction involving NRx Pharmaceuticals, where, as a result of such transaction, Glytech receives at the closing thereof, by virtue of its status as a stockholder of NRx Pharmaceuticals, at least $50 million in cash proceeds.

As used in this section of the Glytech DLA, the term "Aggregate Liquidity Value" for any given date means the sum of each trading day's Daily Liquidity Value during the Eligible Measurement Period applicable for such date, and "Daily Liquidity Value" for any particular trading date means the aggregate proceeds Glytech would receive if it sold that number of shares of Glytech Equity on such trading date equal to 5% of the total number of shares of NRx Pharmaceuticals Stock or Successor Stock sold on such trading date. "Licensed Technology" means the patent rights and know how that disclose, describe or claim subject matter relating to use of DCS in combination with one or more antidepressants or one or more atypical antipsychotics (*e.g.*, lurasidone) that are controlled by Glytech or its affiliates. "Excluded Technology" means any other patent right and knowhow owned by Glytech that does not relate specifically to compositions containing either DCS or lurasidone.

NRx Pharmaceuticals Obligations

The Glytech DLA imposes certain obligations on NRx Pharmaceuticals in connection with maintaining the Glytech License, which include:

- NRx Pharmaceuticals is required to pay to Glytech a fixed annual support payment in the amount of $250,000 per year and to reimburse reasonable, documented travel expenses not exceeding $50,000 per year to support travel to meetings related to patent prosecutions.
- NRx Pharmaceuticals has assumed responsibility for the payment of ongoing patent prosecution costs and related costs required to perfect the Licensed Technology and related intellectual property rights.
- Prior to the assignment of the Licensed Technology and Excluded Technology by Glytech to NRx Pharmaceuticals (such date, the "Assignment Date"), NRx Pharmaceuticals is required to pay or reimburse Glytech for the full costs of defending any patent rights included in the Licensed Technology and Excluded Technology.
- Prior to the Assignment Date, NRx Pharmaceuticals has an obligation to institute, prosecute and control any action or proceeding with respect to any suspected or actual infringement or misappropriation by a third party of any Licensed Technology and Excluded Technology at its own expense. After the Assignment Date, NRx Pharmaceuticals will be the owner of the Licensed Technology and the Excluded Technology, and as such will have full discretion in the institution and prosecution of any infringement action involving the Licensed Technology and the Excluded Technology.
- NRx Pharmaceuticals has agreed to indemnify Glytech and certain related parties from and against any liability or expense (including attorneys' fees) resulting from suits or claims by any third party arising out of (i) NRx Pharmaceuticals', or its permitted sublicensee's, sale or experimental use of products developed from any advice or assistance provided by Glytech hereunder; or (ii) the death of or injury to any person or any damage to property, arising from the development, manufacture, marketing, sale or use of any Product developed from the Licensed Technology. NRx Pharmaceuticals' obligation to indemnify Glytech does not apply to any losses arising from the gross negligence or willful misconduct of Glytech or its related parties or any breach by Glytech of the Glytech DLA.

Glytech Termination Rights

The term of the Glytech DLA continues for an indefinite period unless terminated by one or both parties in accordance with its terms. Glytech has an independent right to terminate the Glytech DLA in the event that (a) NRx Pharmaceuticals is in material breach of the Glytech DLA, including material breaches of the obligations set forth above, and does not rectify such breach within thirty (30) days of notification (unless such breach is not capable of rectification within such thirty (30) day period and NRx Pharmaceuticals acts diligently in a commercially reasonable manner to correct such breach) or (b) if NRx Pharmaceuticals becomes insolvent or has proceedings in voluntary or involuntary bankruptcy instituted against it.

If Glytech terminates the Glytech DLA, then the Glytech License is withdrawn and NRx Pharmaceuticals is required to transfer and assign all of its assets to Glytech, including without limitation any inventions, patent rights and knowhow developed by NRx Pharmaceuticals from the Licensed Technology and all data and research, in whatever format, relating to the Licensed Technologies and the Products.

NRx Pharmaceuticals is currently in compliance with its obligations under the Glytech DLA.

Sarah Herzog Memorial Hospital License Agreement

NRx Pharmaceuticals entered into an Exclusive License Agreement with SHMH, dated April 16, 2019 (the "SHMH License Agreement").

The License

The SHMH License Agreement grants NRx Pharmaceuticals an exclusive, worldwide, royalty bearing license to U.S. Patent No. 9,789,093, certain patent applications pending at that time as well as subsequently filed patent applications in the same priority families, and patents issuing therefrom, including corresponding foreign patents and patent applications (together, the "Licensed Patents"), to develop, manufacture, offer for sale and otherwise commercialize drug products for the treatment of depression and suicide associated with bipolar disorder in humans, including all products containing (a) DCS (including metabolites and structural variants thereof) combined with an antidepressant agent or an antipsychotic agent (including but not limited to lurasidone), or (b) DCS (including metabolites and structural variants thereof) for treatment of all types of bipolar, depressive and/or anxiety disorders and/or symptoms thereof. We have the right to grant sub-licenses, subject to the agreed sub-licensing procedure, but is liable to SHMH for any breaches of a sub-license by a sub-licensee.

NRx Pharmaceuticals Obligations

We are required to make certain payments in order to maintain the license, 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 payment due above may be reduced by 25% in certain circumstances, and by the application of certain sub-license fees.

Royalties

A royalty in an amount equal to: (a) 1% of revenues from the sale of any product incorporating the Licensed Patents when at least one Licensed Patent remains in force, if such product is not covered by a Valid Claim in the country or region in which the sale occurs, or (b) 2.5% of revenues from any product incorporating the Licensed Patents 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 and does 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.

Costs of Licensed Patents

We are required to reimburse SHMH for any costs incurred in filing and prosecuting the Licensed Patents during the term of the SHMH Agreement. We are also responsible for paying directly any ongoing costs associated with the maintenance of the Licensed Patents.

Other Obligations

The SHMH License Agreement imposes certain other obligations on us, including:

- The use commercially reasonable efforts to develop, test, manufacture, obtain regulatory approval for and actively market at least one product using the Licensed Patents.
- The indemnification of SHMH and certain of its affiliates against any claims, proceedings, and liabilities, including legal expenses, resulting from any third party claims arising from (i) the development, manufacture, marketing, sale or use of products incorporating the Licensed Patents or (ii) arising from any material breach of the SHMH License Agreement. The indemnification obligation does not apply to the extent of the gross negligence or misconduct of SHMH or its affiliates.
- The maintenance at Company expense of clinical trial and general commercial liability insurance in amounts not less than one million U.S. Dollars ($1,000,000.00) per occurrence/aggregate of three million U.S. Dollars ($3,000,000.00) for death or personal injury and one million U.S. Dollars ($1,000,000.00) per occurrence/aggregate of three million U.S. Dollars ($3,000,000.00) for property damage, with SHMH named as an additional insured under such policies.
- Record keeping and reporting requirements.

The Licensed Patents are at risk if we fail to fulfill its payment and other obligations under the SHMH License Agreement, including the obligations described above. We are currently in compliance with its obligations under the SHMH License Agreement.

SHMH Termination Rights

The term of the SHMH License Agreement continues until the expiration of the last-to-expire Licensed Patent or a final judgement invalidity or unenforceability of the last Licensed Patent.

SHMH has the independent right to terminate the SHMH License Agreement in the event that NRx Pharmaceuticals (a) is in material breach and does not rectify such breach within sixty (60) days of written notification of such breach or (b) becomes insolvent, or has proceedings in voluntary or involuntary bankruptcy instituted against and such proceeding is not set aside within sixty (60) days. If we make an application or claim that challenges the validity, enforceability or scope of any of the Licensed Patents, SHMH also has the right to terminate the SHMH Agreement in respect of the Licensed Patent(s) that are included in such proceeding.

Upon termination of the SHMH License Agreement, the license to use the Licensed Patents will terminate, and all rights included therein shall revert to SHMH.

As of the date hereof, we have not received any notice from SHMH alleging any material breach of the SHMH License Agreement by NRx Pharmaceuticals.

Aviptadil/ZYESAMI

State University of New York License and Option Agreement

We have entered into a written License and Option Agreement as described below with The Research Foundation For The State University of New York (the "Foundation"), dated September 1, 2020 (the "SUNY License Agreement").

The License

Pursuant to the SUNY License Agreement, the Foundation has granted to us a revocable,non-exclusive, worldwide license, without the right to sublicense, with royalties paid for 2 years, to use Foundation Subject Matter (defined below) to develop, manufacture and offer for sale products and/or services for the therapeutic treatment of COVID-19 in humans and/or COVID-19 associated respiratory failure. Although the license is non-exclusive, the Foundation has agreed in writing that it will not grant any other licenses to Foundation Subject Matter that would allow any third-party to manufacture or offer for sale products or services for the treatment of COVID-19 during the term of the SUNY License Agreement.

"Foundation Subject Matter" means the technical information and material that are owned by Foundation, and all other intellectual property, including scientific and clinical information and data, protocols, trademarks, and trade secrets associated with or relating to (a) the therapeutic uses of the Foundation Subject Matter to treat COVID-19 in humans and/or COVID-19 associated respiratory failure (the "Primary Field Use") and (b) the therapeutic or prophylactic uses of the Foundation Subject Matter to treat other human pulmonary disorders, including Adult Respiratory Distress Syndrome (ARDS) and sepsis (the "Alternative Field Use"). Such technical information and materials include know-how, formulations, knowledge, compositions, methods, processes, and procedures pertaining to the isolation, preparation, formulation, and/or administration of vasoactive intestinal polypeptide (VIP) for the treatment of a human disorder, which includes the Investigational New Drug (IND) application entitled "Vasoactive Intestinal Peptide (VIP) in the Adult Respiratory Distress Syndrome", Hussein Foda, MD, Investigator; State University of New York at Stony Brook, Sponsor.

The term of the SUNY License Agreement is two (2) years from the date of the agreement (the "Term") during which period, the parties are expected to negotiate a superseding royalty-bearing license for the Primary Field Use. The royalty rate and other terms and conditions contained in any such superseding license will be negotiated by the parties taking into account the prevailing circumstances and consistent with industry standards. If the parties are unable to reach agreement on the terms and conditions of the superseding license, the current license will terminate at the end of the Term unless otherwise agreed.

The Option

The SUNY License Agreement also grants an exclusive option to NRx Pharmaceuticals to negotiate for a commercial royalty-bearing, worldwide license with the right to sublicense, to manufacture and offer for sale products and/or services that encompass the Foundation Subject Matter for the Alternative Field Use. During the Term, the Foundation has agreed to refrain from offering any commercial rights whatsoever in Foundation Subject Matter for the Alternative Field Use to any third party. However, if NRx Pharmaceuticals exercises its option and the parties are unable to agree to terms and conditions for a royalty bearing commercial license within 60 days, the option will automatically terminate and NRx Pharmaceuticals will have no rights to Foundation Subject Matter in the Alternative Field Use.

NRx Pharmaceuticals Obligations

The SUNY License Agreement imposes certain obligations on NRx Pharmaceuticals in order to maintain the license, including the following:

- A fixed maintenance fee in the amount of fifty thousand U.S. dollars ($50,000.00) is due to the Foundation on September 1, 2021.

- We are required to diligently pursue the development and commercialization of the Foundation Subject Matter through the implementation of an agreed Development & Commercialization Plan.
- We must indemnify and hold harmless the Foundation and certain of its affiliates against any liability, damage, loss or expense (including reasonable attorneys' fees) incurred in connection with any claims or actions arising out of (i) the development manufacture, marketing sale or use (in commerce or human clinical trials) by NRx Pharmaceuticals or its affiliates of any product, process or service relating to, or developed pursuant to, the SUNY License Agreement; or (ii) any other activities carried out by or on behalf of NRx Pharmaceuticals pursuant to the SUNY License Agreement. Such indemnity does not apply if the liability, damage or loss is attributable to the negligent activities of the Foundation or its affiliates.
- We are required, at its sole cost and expense, to procure and maintain policies of comprehensive general liability insurance in amounts not less than five million U.S. Dollars ($5,000,000.00) with the Foundation named as an additional insured under such policies.
- We are required to maintain full and accurate books and records, which the Foundation has the right to inspect, and to provide semi-annual reports, including the status of our progress with the agreed plan for development and commercialization of the Foundation Subject Matter.
- We are required to comply with all applicable laws, including export controls regulations.

We are currently in compliance with its obligations under the SUNY License Agreement.

SUNY Termination Rights

The Foundation has the right to deliver a default notice if we commit a material breach of the SUNY Licensee Agreement. If Company is unable to cure such default within thirty (30) days following notice and provide adequate assurance of future performance, then the Foundation may terminate the SUNY License Agreement. The SUNY License Agreement terminates automatically if NRx Pharmaceuticals: (i) ceases to attempt to carry on its business with respect to the rights granted in such agreement; (ii) becomes insolvent; (iii) makes an assignment for the benefit of creditors; or (iv) challenges the validity or enforceability of such Agreement before any court, arbitrator, or other tribunal. Upon termination of the SUNY License Agreement for any reason, we must cease all use of Foundation Subject Matter.

As of the date hereof, we have not received any notice from the Foundation alleging any material breach of the SUNY License Agreement by NRx Pharmaceuticals.

US Government Rights

The license granted by the Foundation is subject to the rights of the United States Government, if any, resulting from any funding of the Foundation Subject Matter by the United States Government. This may include (i) reserving to the United States Government, a royalty-free, non-exclusive, non-transferable license to use the Foundation Subject Matter and (ii) requiring that any products produced using the Foundation Subject Matter that are used or sold by us in the United States must be manufactured substantially in the United States unless a waiver under 35 U.S.C. Section 204 is granted by the appropriate United States government agency.

Binding Collaboration Agreement with Relief Therapeutics

We have entered into a Binding Collaboration Agreement, dated as of September 18, 2020 (the "Relief Agreement"), with Relief Therapeutics Holding AG and its wholly owned subsidiary Therametrics Discovery AG (collectively "Relief").

The Collaboration

The Relief Agreement establishes the terms under which NRx Pharmaceuticals and Relief will collaborate and assist each other to maximize revenues in their respective territories from the sale of aviptadil (the "Relief Product"), for intravenous and inhaled use primarily in the treatment of COVID-19 related conditions. The NRx Pharmaceuticals territory includes the United States, Canada, and Israel. The Relief territory includes the European Union, Switzerland, Iceland, Norway, the United Kingdom, the Channel Islands, Liechtenstein, Monaco, Andorra, San Marino and Vatican City. The collaboration will be conducted on an exclusive basis and the parties have agreed not to develop or commercialize any drug product that may be competitive with the Relief Product.

The Relief Agreement provides that Relief fund the costs associated with the clinical trials and development of the inhaled Relief Product in the United States, which will be conducted and managed by NRx Pharmaceuticals. We are responsible for ensuring that the cost of the clinical trials and development activities do not exceed the budget contemplated accepted by the parties by more than thirty percent (30%).

The Relief Agreement also provides options for the parties to develop the Relief Product to treat health conditions outside theCOVID-19 zone and for the commercialization of the Relief Product outside the parties' respective territories.

The other assets that the parties bring to the collaboration include:

Relief:

- funding for clinical trials, formulation and stability of the Relief Product, and purchasing supplies for drug manufacturing;
- U.S. Patent No. 8,178,489, and related Patents and corresponding foreign patents;
- U.S. and European Union Orphan Drug Designations related to ARDS, sarcoidosis, and pulmonary hypertension;
- EU-compliant toxicity file and preclinical data; and
- Clinical Phase 2 data from prior in-human trials conducted in the EU.

NRx Pharmaceuticals:

- U.S. regulatory information;
- Authorized application, and information included in, or pursuant to, United States IND 149,152 or United States IND 151,070 and related documents;
- GCP clinical trial structure with multiple qualified study sites, data monitoring, institutional review board, active protocols, and ongoing data collection;
- Manufacturing and cGMP formulation and stability data for the Relief Product; and
- Qualification through SAMS and teaming agreements with BARDA preferred partners.

For U.S. regulatory purposes, NRx Pharmaceuticals will be the sole applicant on any NDA or other application for a regulatory license submitted to the FDA with respect to the Relief Product. However, the parties will jointly control all material decisions related to any NDA and any related matters.

Funding by Relief Therapeutics

The Relief Agreement provides that Relief fund the costs associated with the clinical trials and development of the inhaled Relief Product in the United States, which will be conducted and managed by NRx Pharmaceuticals. We are appointed to direct, design, and implement the entire pathway for US drug approval for the Relief Product. Pursuant to the Relief Agreement, NRx Pharmaceuticals is responsible for not exceeding the Relief Product trial budget of $8.3 million by more than 30% (approximately $10.7 million) for the original sample size of 144 participants (the "Initial Budget"). In October 2020, the study's Data Safety Monitoring Board and statistical consultant advised us to increase the size of the study to at least 200 participants, resulting in an additional $4 million in potential study costs. The Relief Agreement states that costs of drug formulation, manufacture, CMC, stability, etc., are not included within Initial Budget, however, Relief is required to fund the costs of formulation, stability, and manufacturing at MedisourceRx, Bachem, and Nephron Pharmaceuticals.

The Relief Agreement states that in the event Relief does not approve additional overages to the Initial Budget, NRx Pharmaceuticals shall be free to bring in other parties in order to complete the Relief Product study. The Relief Agreement further provides for Relief to fund the costs associated with the clinical development of the inhaled Relief Product in the United States in reliance upon our agreement to conduct, manage, supervise and oversee its clinical development. Should Relief not fund the costs associated with the clinical development of the inhaled Relief Product in the United States, then we shall have the freedom to bring a replacement investor.

As of June 9, 2021, Relief has reimbursed us for approximately $10.9 million of expenses, but has not paid approximately $4 million in invoiced costs associated with conduct of the Relief Product clinical trial, reformulation, and manufacture of ZYESAMI. Additionally, as of June 9, 2021, Relief has not funded the costs of the inhaled trial. We have advised Relief that we are funding those costs with capital provided by other investors. This lack of funding on the part of Relief, therefore, does not negatively impact our ability to continue development of ZYESAMI. We reaffirm our commitment to honoring our collaboration agreement with Relief Therapeutics and are committed to resolving these issues with Relief Therapeutics in an amicable manner, although these circumstances may lead to a dispute with Relief Therapeutics regarding what share of profits Relief Therapeutics should be entitled to receive based upon its reduced participation in the project.

Sharing of Intellectual Property

Under the Relief Agreement, each party has a broad right to use the other party's intellectual property to develop and commercialize the Relief Product in its respective territory. To the extent necessary, each party is required to grant, or obtain from third parties, cross-licenses to allow the other party to use its intellectual property in the other party's territory.

Each party will continue to own the intellectual property it possessed prior to the collaboration, and any intellectual property that is developed jointly by the parties relating to the Relief Product will be owned jointly by the parties and each party will have the right to use any joint intellectual property in its territory. Each Party is responsible for filing and prosecuting applications for patents, trademarks and other intellectual property in their respective territories and for the protection, maintenance, and enforcement of such intellectual property in such territory.

Commercialization

Under the Relief Agreement, each Party will develop a commercialization plan for the Relief Product in its territory, which is subject to approval by the other party, and each party is obligated to use commercially reasonable efforts to commercialize the Relief Product in its territory consistent with the approved commercialization plan. Each party will have full rights to commercialize the Relief Product in its territory, subject to the approved commercialization plan, including the right to work with licensees, distributors, research organizations, marketing organizations and other third parties. Each party has agreed not to commercialize the

Relief Product in the other party's territory. Relief retains the right to identify commercialization partners for countries outside the parties' territories, and any arrangements with such commercialization partners will be subject to the terms of the Relief Agreement.

Division of Profits

Pursuant to the terms of the Relief Agreement, the parties will share the net profits from the sale of the Product as follows:

	NRx Pharmaceuticals Share	Relief Share
NRx Pharmaceuticals Territory	50%	50%
Relief Territory	15%	85%
Rest of the World	20%	80%

Each party is required to maintain books and records sufficient to confirm the net profits generated from the sales of Relief Product in their respective territories and each party has the right to audit the other party's books and records. The net profits will be calculated after reimbursement to Relief for the cost of any supplies funded by Relief in connection with the manufacturing of the Relief Product.

Our share of the profits from our territory could be at risk if we do not achieve at least 70% of the sales targets agreed from time to time by the parties (absent macroscopic changes in the market environment), in which case, Relief has the right to engage an outside sales entity to manage U.S. sales.

As described above in the section titled "*— Funding by Relief Therapeutics*" and elsewhere in this prospectus, we reaffirm our commitment to honoring its collaboration agreement with Relief Therapeutics and is committed to resolving these aforementioned issues with Relief Therapeutics in an amicable manner, although these circumstances may lead to a dispute with Relief Therapeutics regarding what share of profits Relief Therapeutics should be entitled to receive based upon its reduced participation in the project.

Cardinal Health Distribution Agreement

We have entered into an Exclusive Distribution Agreement with Cardinal Health 105, Inc. ("Cardinal Health"), having an effective date of September 25, 2020 (the "CHDA"). Under the CHDA, we appointed Cardinal Health as the exclusive third-party logistics distribution agent, and as an authorized distributor, of certain NRx Pharmaceuticals' products (the "Products") in the United States and its territories, possessions and commonwealths.

The Services

Under the CHDA, Cardinal Health will provide services to us including, without limitation, storage, distribution, returns, customer support, financial support, EDI and system access support (the "CHDA Services"). The CHDA Services are to be provided by Cardinal Health as set forth in one of two operating model guidelines: the Traditional Third-Party Logistics ("3PL") Operating Guidelines ("OPG"), or the Title Model Operating Guidelines ("TMOPG"). Both the OPG and the TMOPG are attached to and incorporated by reference into the CHDA. NRx Pharmaceuticals and Cardinal Health have not yet decided which of these two operating model guidelines will govern the delivery of the CHDA Services; that decision will be made closer to approval by the FDA of our first commercial product.

The OPG:

- Identify written policies and procedures to be followed in delivering the CHDA Services;
- Identify the deliverables from each Party required under the CHDA;
- Define the roles and responsibilities of each Party and key personnel;

- Define the reports and data required; and
- Set the baseline for the OPG program for delivery of the CHDA Services, and manage future changes to the operating model.

Under the OPG, Cardinal Health will accept Products from us on consignment, with Products being transported by us or its shipping agent to Cardinal Health's secured access 3PL warehousing facilities. Cardinal Health has established standard operating procedures for managing all activities at its warehousing facilities, which are approved and controlled by Cardinal Health's centralized distribution management system. All Cardinal Health warehouse personnel are trained under documented programs that are compliant with applicable federal and state laws and regulations and with cGMP. Our Products will be warehoused by Cardinal Health under controlled temperature conditions, with any temperature excursions lasting more than one hour being reported within two business days from the discovery of the excursion. Product is picked from inventory in Cardinal Health's warehouse on a "First-to-Expire, First-Out" basis.

Pricing and conditions of sale are set by us, which also publishes price lists for Products to be sold to its customers. Cardinal Health sends invoices via email to customers on the day of shipment, or by mail on the morning following shipment, of Product. Customers then remit payment to our bank lockbox via EFT, ACH or wire transfer, and NRx Pharmaceuticals' bank then forwards information regarding payments to Cardinal Health which then reconciles and applies cash receipts to the accounts receivable.

Most of the logistical provisions in the TMOPG are identical to those of the OPG. The primary material difference between the TMOPG and the OPG is that under the TMOPG, title to and ownership of Product passes from NRx Pharmaceuticals to Cardinal Health upon purchase of Product by Cardinal Health from NRx Pharmaceuticals or its manufacturing agent. Cardinal Health handles all sales, shipment/distribution, customer service and AR activities in the same way as outlined for the OPG model, except that Cardinal Health maintains a bank lockbox for receipt of payments of invoices by customers, rather than that lockbox being maintained by NRx Pharmaceuticals.

Pricing and Payment; Forecast and Price List

As compensation for the CHDA Services delivered by Cardinal Health, we are responsible for paying the fees set forth in the CHDA. The fees schedule is confidential to Cardinal Health and cannot be disclosed without permission from Cardinal Health. Fees are subject to adjustment not more than once per contract year (after the first contract year) by 3%, or if Cardinal Health can reasonably demonstrate a material increase in the cost of providing the CHDA Services.

Under the CHDA, we are responsible for providing a forecast of volume of Product to be handled by Cardinal Health. Any variances from the forecast, and any adjustments that may therefore be needed to the forecast going forward, are handled through good-faith negotiation by the Parties. We are also responsible for providing to Cardinal Health a Product price list, setting prices to be charged to customers for Product sold by or distributed by Cardinal Health. Any change to be implemented in pricing for Product must be communicated by us to Cardinal Health at least 72 hours prior to the effective date of such price change.

Term and Termination

The CHDA has an Initial Term of three years following first shipment of anFDA-approved Product to a commercial customer, and automatically renews for additional terms of one year each (a "Renewal Term"), unless the CHDA is earlier terminated during either the Initial Term or any Renewal Term by a written notice of termination given by either Party to the other at least 90 days prior to the end of the Initial Term or any Renewal Term. The CHDA also can be immediately terminated by either Party if: (1) the other Party files for bankruptcy protection or enters into receivership or trusteeship, and if a bankruptcy or insolvency order is entered such order is not discharged within 30 days; or (2) the other Party materially breaches any provision of the CHDA and such breach is not cured within 30 days of receiving notice of breach from the non-breaching Party, except that

Cardinal Health may terminate the CHDA if NRx Pharmaceuticals fails to timely pay invoices from Cardinal Health within 15 days of having received written notice of non-payment from Cardinal Health. Following termination for any reason, each Party's rights and obligations that accrued prior to the date of termination shall survive the termination, and all Product warehoused at Cardinal Health's 3PL facility/ies will be returned to NRx Pharmaceuticals or its designee.

TFF Feasibility Agreement

We have entered into a Feasibility Study and Material Transfer Agreement with TFF Pharmaceuticals, Inc. ("TFF"), with an effective date of January 6, 2021 (the "TFF Agreement"). TFF is a licensee of certain intellectual property relating to a process called "Thin Film Freezing", which is designed to improve the solubility of poorly water-soluble drugs by generating dry powder particles with properties targeted for inhalation delivery.

The Feasibility Study

The TFF Agreement provides the framework for a feasibility study of the applicability of TFF's thin film freezing drug product manufacturing technology (the "TFF Technology") to the production of Aviptadil for inhalation for NRx Pharmaceuticals. We will provide its proprietary ZYESAMI compound(s) to TFF, and TFF will use the compounds to determine whether or not the TFF Technology is suitable to produce a storage-stable inhalable dosage form of ZYESAMI for use in an ongoing NRx Pharmaceuticals clinical trial examining the effectiveness of inhaled ZYESAMI for the treatment of severe COVID-19 in human patients, with the potential for subsequent production of such dosage forms on a commercial scale.

Under the TFF Agreement, the feasibility study is being managed by TFF but the research and development work is to be performed at the University of Texas at Austin, pursuant to a sub-contract between TFF and the University of Texas at Austin.

The Statement of Work

The TFF Agreement references a Statement of Work ("SOW"), which is intended to provide complete details and protocols, as well as a budget plan, for TFF to conduct the feasibility study. As of June 9, 2021, no SOW has been finalized and signed by the parties. However, TFF has elected to proceed with the feasibility study without compensation by us.

Ownership of Results

Under the TFF Agreement, we own all right, title and interest in and to all results, inventions, discoveries, innovations and know-how that is an extension of or improvement to NRx Pharmaceuticals' "Background IPR" or that otherwise relates to the ZYESAMI compounds. In a similar fashion, TFF owns all right, title and interest in and to all results, inventions, discoveries, innovations and know-how that is an extension of or improvement to TFF's Background IPR or that otherwise relates to the TFF Technology. As used in the TFF Agreement, "Background IPR" means any intellectual property rights and know-how owned or controlled by a party prior to entering into the TFF Agreement or generated by a party independently of the feasibility study. Each party retains its exclusive rights to patent the Background IPR and any new intellectual property that it owns as a result of the feasibility study, and the parties have agreed to work cooperatively and in good faith to secure intellectual property rights to any new intellectual property rights that are generated by both of them jointly ("Joint IPR"), with NRx Pharmaceuticals being responsible for the filing, prosecution, maintenance and defense of such Joint IPR. Should either party decline to participate in or continue to support such filing, prosecution, maintenance and/or defense of any Joint IPR, that party is required to promptly execute or cause to be executed all documents necessary to assign such Joint IPR to the other party.

Term and Termination

The TFF Agreement remains in force until the earlier to occur of the completion of the feasibility study and one year from the effective date of the TFF Agreement (January 6, 2022). The TFF Agreement can be earlier terminated by either party for breach by the other party (after expiration of a 30-day cure period), or without cause by either party with 30 days' written notice to the other party.

Nephron Master Services Agreement

We have entered into a Master Services Agreement with Nephron SC, Inc., and Nephron Pharmaceuticals Corporation, which are subsidiaries of Nephron, Inc. (collectively, the "Supplier") with an effective date of August 25, 2020 (the "Nephron Agreement"). The Nephron Agreement was subsequently amended on September 2, 2020, November 5, 2020 and February 8, 2021.

Under the Nephron Agreement, the Supplier will be NRx Pharmaceuticals' primary U.S. based supplier of the NRx Pharmaceutical COVID-19 Drug in forms suitable for both injection and inhalation. We will be responsible for sourcing and providing the Supplier with the active pharmaceutical ingredient (Vasoactive Intestinal Peptide) for the NRx Pharmaceutical COVID-19 Drug, other raw materials and the labeling information necessary for the Supplier to manufacture and supply the NRx Pharmaceutical COVID-19 Drug to us. The Supplier is responsible for providing excipients (inactive ingredients), components, packaging and other materials necessary to manufacture and deliver the NRx Pharmaceutical COVID-19 Drug in accordance with the purchase orders placed by us.

The Supplier will be required to manufacture our COVID-19 Drug in accordance with cGMP, NRx Pharmaceuticals' specifications and the requirements of the Nephron Agreement, which includes stringent quality assessments, inspection, testing, storage and record keeping provisions. The quality systems, processes and technical controls related to the quality assurance requirements for the manufacture and supply of our COVID-19 Drug have been further detailed in a separate quality agreement between the parties. We have the right to inspect and audit the Supplier's facilities from time to time.

The Nephron Agreement has an initial term of five (5) years from the date of the first commercial shipment to NRx Pharmaceuticals, which may be extended by successive annual (1 year) renewals. Either party may terminate the Nephron Agreement prior to the expiration of the term in the event of a material breach by, or bankruptcy of, the other party, subject to applicable cure periods. In addition, we have the right to terminate by giving notice to the Supplier if certain events occur, including the issuance by the FDA of a "Warning Letter" to the Supplier with respect to any facility used to manufacture, test, validate, label, package or store our COVID-19 Drug or the receipt by us of an excessive number of documented customer complaints related to our COVID-19 Drug quality.

During the term and for one year thereafter, the Supplier may not develop, manufacture, supply, distribute or market our COVID-19 Drug or its bioequivalent for or on behalf of itself or any third party, unless it acquires certain rights from NRx Pharmaceuticals.

Government Regulation and Product Approval

Government authorities in the United States and in other countries, at the federal, state and local level, extensively regulate, among other things, the research, development, testing, manufacture, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, import and export, pricing, and government contracting related to pharmaceutical products such as those we are developing. The processes for obtaining marketing approvals in the United States and in foreign countries, along with subsequent compliance with applicable statutes and regulations, require the expenditure of substantial time and financial resources.

United States Government Regulation

In the United States, the FDA regulates drugs under the FFDCA and its implementing regulations. The process of obtaining marketing approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable United States requirements at any time during the product development process, approval process or after approval, may subject an applicant to a variety of administrative or judicial sanctions or other actions, such as the FDA's delay in review of or refusal to approve a pending NDA, withdrawal of an approval, imposition of a clinical hold or study termination, issuance of Warning Letters or Untitled Letters,

mandated modifications to promotional materials or issuance of corrective information, requests for product recalls, consent decrees, corporate integrity agreements, deferred prosecution agreements, product seizures or detentions, refusal to allow product import or export, total or partial suspension of or restriction of or imposition of other requirements relating to production or distribution, injunctions, fines, debarment from government contracts and refusal of future orders under existing contracts, exclusion from participation in federal and state healthcare programs, FDA debarment, restitution, disgorgement or civil or criminal penalties, including fines and imprisonment.

The process required by the FDA before a new drug may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests, animal studies and formulation studies in compliance with the FDA's good laboratory practice regulations;
- submission to the FDA of an IND application which must become effective before human clinical trials may begin;
- approval by local or central Independent Review Boards ("IRBs") who are charged with protecting safety of research subjects before each clinical trial may be initiated;
- performance of human studies that meet the legal standard of "adequate and well-controlled clinical trials", in accordance with Good Clinical Practices ("GCP") and other regulations in order to establish the safety and efficacy of the proposed drug product for each indication;
- submission to the FDA of a New Drug Application;
- satisfactory completion of an FDA advisory committee review, if applicable;
- satisfactory completion of an FDA inspection of selected clinical trial sites to determine GCP compliance.
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with cGMP regulations and to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity; and
- FDA review and approval of the NDA.

Additionally, if a drug is considered a controlled substance, prior to the commencement of marketing, the DEA must also determine the controlled substance schedule, taking into account the recommendation of the FDA.

Preclinical Studies and IND Submission

Preclinical studies include laboratory evaluation of product chemistry, pharmacology, toxicity and formulation, as well as animal studies to assess potential safety and efficacy. An IND sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data and any available clinical data or literature, among other things, to the FDA as part of an IND. Some preclinical testing may continue even after the IND is submitted. Once the IND is submitted, the sponsor must wait 30 calendar days before initiating any clinical trials. During this time, among other things, the FDA has an opportunity to review the IND for safety to assure that research subjects will not be subjected to unreasonable risk. The FDA may raise concerns or questions related to one or more proposed clinical trials and place the clinical trial on a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, submission of an IND may not result in the FDA allowing clinical trials to commence.

Implications for NRX-100/101

We have filed INDs and FDA has accepted INDs 134025 and 129194 forNRX-100 and NRX-101 respectively. The FDA has advised us that no further preclinical studies are needed for submission of an NDA for NRX-100. The FDA has advised us and we have agreed that a genotoxicity study and a non-clinical maternal/fetal study for potential fetal effects are required prior to filing of an NDA. We intend to complete those studies in 2021. The FDA guidance exempts drugs used for less than 12 weeks for carcinogenicity studies. We intend to seek the FDA's written exemption from carcinogenicity studies on the grounds that treatment with NRX-101 is expected to last less than 12 weeks.

Implications for ZYESAMI

It is well known that the FDA is uniquely rigorous in its safety requirements for pulmonary drugs because of the extraordinary vulnerability of the cells that line the lung to potential injury. An extensive body of nonclinical studies was amassed by Mondo Biotech (Relief's predecessor) and Biogen, Inc. (NASDAQ:BIIB) between 2005 and 2011, which resulted in the filing of an Investigational Medicinal Products Dossier ("IMPD") with both the FDA and European regulatory authorities. Mondo conducted four regulatory meetings with the FDA and agreed on an extensive package of both acute and chronic toxicity, clinical pharmacology, and pharmacokinetic studies that would be required prior to human studies of aviptadil in the US. Although Biogen never entered the US market because of its decision to focus on other therapeutic areas, all requested studies were completed to the FDA's specifications by GLP-compliant contract research organizations. We have obtained the FDA's written communication that all required nonclinical safety studies related to ZYESAMI (aviptadil) have been submitted to the FDA and reviewed. No further nonclinical studies are required or anticipated prior to filing of the NDA for ZYESAMI.

Clinical Trials

Clinical trials involve the administration of the investigational new drug to human subjects under the supervision of qualified investigators in accordance with GCP requirements, which include the requirement that all research subjects provide their informed consent in writing for their participation in any clinical trial, and review and approval by an IRB. Clinical trials are conducted under protocols detailing, among other things, the objectives of the trial, the trial procedures, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated, and a statistical analysis plan. A protocol for each clinical trial and any subsequent protocol amendments must be submitted to the FDA as part of the IND. In addition, a central or local IRB at each institution participating in the clinical trial must review and approve the plan for any clinical trial before it commences at that institution, and the IRB must continue to oversee the clinical trial, including any changes, while it is being conducted. Information about certain clinical trials, including a description of the study and study results, must be submitted within specific timeframes to the NIH for public dissemination on their clinicaltrials.gov website.

Human clinical trials are typically conducted in three sequential phases, which may overlap or be combined. In Phase 1, the drug is initially introduced into healthy human subjects or subjects with the target disease or condition and tested for safety, dosage tolerance, absorption, metabolism, distribution, excretion and, if possible, to gain an early indication of its effectiveness. In Phase 2, the drug typically is administered through well-controlled studies to a limited subject population with the target disease or condition to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage. In Phase 3, the drug is administered to an expanded subject population, generally at geographically dispersed clinical trial sites, in two adequate and well-controlled clinical trials to generate enough data to statistically evaluate the efficacy and safety of the product for approval, to establish the overall risk-benefit profile of the product and to provide adequate information for the labeling of the product.

The manufacture of investigational drugs for the conduct of human clinical trials is subject to cGMP requirements. Investigational drugs and active pharmaceutical ingredients imported into the United States are also subject to regulation by the FDA relating to their labeling and distribution. Further, the export of investigational drug products outside of the United States is subject to regulatory requirements of the receiving country as well as United States export requirements under the FFDCA.

Progress reports and other summary information detailing the results of the clinical trials must be submitted at least annually to the FDA and more frequently if certain serious adverse events (as defined by the FDA, "Serious Adverse Events") occur or other significant safety information is found. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, or at all. Furthermore, the FDA or the sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects are being exposed to an unacceptable health risk or the trial is not being conducted in accordance with the applicable regulatory requirements or the protocol. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to subjects. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group regularly reviews accumulated data and advises the study sponsor regarding the continuing safety of trial subjects, potential trial subjects, and the continuing validity and scientific merit of the clinical trial. We may also suspend or terminate a clinical trial based on evolving business objectives and/or competitive climate.

Implications for NRX-100/101

In the case of NRX-100/101, the FDA has agreed with us in writing that the investigational product meets the standards for a 505.b.2 (commonly called drug-repurposing) pathway, whereby the extensive safety literature regarding the individual components of NRX-101 may be cited in lieu of repeating various preclinical and phase I clinical studies.

Because of examples in recent years where sponsors have received Complete Response Letters based on lack of agreement with the FDA regarding the research path required for NDA submission, we worked collaboratively with the FDA for one year in order to negotiate a Special Protocol Agreement ("SPA") that would govern the development of NRX-101 and would define the Phase 3 trial required for drug approval, should the clinical trial be successful. This SPA was issued to us in April 2018 and defines the single clinical trial required for approval of NRX-101 for treatment of bipolar depression with acute suicidal ideation or behavior.

Implications for ZYESAMI

In the case of ZYESAMI, the path to drug approval is based on 505.b.1. Moreover, the FDA awarded Orphan Drug Status to the State University of New York at Stony Brook for the use of RLF-100, a prior formulation of ZYESAMI, in ARDS in 2001. However,COVID-19 is not considered a rare disease and the FDA has advised us that any potential benefits afforded to aviptadil based on an orphan drug designation would not apply to its use for the treatment of COVID-19. *See* "Risk Factors-Risks Related to NRx Pharmaceuticals' Business and Industry-We do not anticipate obtaining orphan drug protection for the treatment of COVID-19."

Marketing Approval

Assuming successful completion of the required clinical testing, the results of the preclinical and clinical studies, together with detailed information relating to the product's chemistry, manufacture, controls and proposed labeling, among other things, are submitted to the FDA as part of an NDA requesting approval to market the product for one or more indications. In most cases, the submission of an NDA is subject to a substantial application user fee. These user fees must be filed at the time of the first submission of the application, even if the application is being submitted on a rolling basis. A waiver from the application user fee may be sought by an applicant. One basis for a waiver of the application user fee is if the applicant employs fewer than 500 employees, including employees of affiliates, the applicant does not have a drug product that has been approved under a human drug application and introduced or delivered for introduction into interstate commerce, and the applicant, including its affiliates, is submitting its first human drug application. Under the Prescription Drug User Fee Act ("PDUFA") guidelines that are currently in effect, the FDA has agreed to certain performance goals regarding the timing of its review of an application. The FDA aims to review 90% of all standard review applications within ten months of acceptance for filing and six months of acceptance for filing for priority review applications.

In addition, under the Pediatric Research Equity Act an NDA or supplement to an NDA for a new active ingredient, indication, dosage form, dosage regimen or route of administration must contain data that are adequate to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations, and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may, on its own initiative or at the request of the applicant, grant deferrals for submission of some or all pediatric data until after approval of the product for use in adults, or full or partial waivers from the pediatric data requirements.

The FDA may also require submission of a REMS either during the application process or after the approval of the drug to ensure the benefits of the drug outweigh the risks. The REMS plan could include medication guides, physician communication plans, assessment plans, and elements to assure safe use, such as restricted distribution methods, patient registries or other risk minimization tools.

The FDA conducts a preliminary review of all NDAs within the first 60 days after submission, before accepting them for filing, to determine whether they are sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the application must be resubmitted with the additional information. The resubmitted application is also subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review. The FDA reviews an NDA to determine, among other things, whether the drug is safe and effective and whether the facility in which it is manufactured, processed, packaged or held meets standards designed to assure the product's continued safety, quality and purity.

Under the FFDCA, before approving a drug for which no active ingredient (including any ester or salt of active ingredients) has previously been approved by the FDA, the FDA must either refer that drug to an external advisory committee or provide in an action letter, a summary of the reasons why the FDA did not refer the drug to an advisory committee. The external advisory committee review may also be required for other drugs because of certain other issues, including clinical trial design, safety and effectiveness, and public health questions. An advisory committee is a panel of independent experts, including clinicians and other scientific experts, that reviews, evaluates and provides a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA, the FDA will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications by the manufacturer and all of its subcontractors and contract manufacturers. Additionally, before approving an NDA, the FDA will inspect one or more clinical trial sites to assure compliance with GCP regulations.

The testing and approval process for a NDA requires substantial time, effort and financial resources, and each may take several years to complete. Data obtained from preclinical and clinical testing are not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent marketing approval. The FDA may not grant approval of an NDA on a timely basis, or at all.

After evaluating the NDA and all related information, including the advisory committee recommendation, if any, and inspection reports regarding the manufacturing facilities and clinical trial sites, the FDA may issue an approval letter, or, in some cases, a complete response letter. A complete response letter generally contains a statement of specific conditions that must be met in order to secure final approval of the NDA and may require additional clinical or preclinical testing, or other information, in order for FDA to reconsider the application. The FDA has a review goal of completing its review of 90% of resubmissions within two or six months after receipt, depending on the type of information included. Even with submission of this additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval. If and when those conditions have been met to the FDA's satisfaction, the FDA may issue an approval letter. An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications.

Even if the FDA approves a product, it may limit the approved indications for use of the product, require that contraindications, warnings or precautions be included in the product labeling, including a black boxed warning, require that post-approval studies, including Phase 4 clinical trials, be conducted to further assess a drug's safety after approval, require testing and surveillance programs to monitor the product after commercialization, or impose other conditions, including distribution restrictions or other risk management mechanisms under a REMS which can materially affect the potential market and profitability of the product. The FDA may prevent or limit further marketing of a product based on the results of post-marketing studies or surveillance programs. After approval, certain circumstances may require FDA notification, review, or approval, as well as further testing. These may include some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, or new safety information.

Special FDA Expedited Review and Approval Programs

The FDA has various programs, including Fast Track designation, accelerated approval, priority review and Breakthrough Therapy (as defined below) designation, that are intended to expedite or simplify the process for the development and FDA review of drugs that are intended for the treatment of serious or life threatening diseases or conditions, and demonstrate the potential to address unmet medical needs or present a significant improvement over existing therapy. The purpose of these programs is to provide important new drugs to patients earlier than under standard FDA review procedures.

To be eligible for a Fast Track designation, the FDA must determine, based on the request of a sponsor, that a product is intended to treat a serious or life threatening disease or condition and demonstrates the potential to address an unmet medical need. The FDA will determine that a product will fill an unmet medical need if the product will provide a therapy where none exists or provide a therapy that may be potentially superior to existing therapy based on efficacy, safety, or public health factors. If Fast Track designation is obtained, drug sponsors may be eligible for more frequent development meetings and correspondence with the FDA. In addition, the FDA may initiate review of sections of an NDA before the application is complete. This "rolling review" is available if the applicant provides and the FDA approves a schedule for the remaining information.

In some cases, a Fast Track product may be eligible for accelerated approval or priority review.

The FDA may give a priority review designation to drugs that are intended to treat serious conditions and provide significant improvements in the safety or effectiveness of the treatment, diagnosis, or prevention of serious conditions. A priority review means that the goal for the FDA is to review an application in six months, rather than the standard review of ten months under current PDUFA guidelines. These six and ten month review periods are measured from the "filing" date rather than the receipt date for NDAs, which typically adds approximately two months to the timeline for review and decision from the date of submission. Products that are eligible for Fast Track designation may also be considered appropriate to receive a priority review.

In addition, products studied for their safety and effectiveness in treating serious or life-threatening illnesses or conditions and that fill an unmet medical need may be eligible for accelerated approval and may be approved on the basis of adequate and well-controlled clinical trials establishing that the drug product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require a sponsor of a drug receiving accelerated approval to perform post-marketing studies to verify and describe the predicted effect on irreversible morbidity or mortality or other clinical endpoints, and the drug may be subject to accelerated withdrawal procedures.

Moreover, under the provisions of the new Food and Drug Administration Safety and Innovation Act enacted in 2012, a sponsor can request designation of a product candidate as a "Breakthrough Therapy." A Breakthrough Therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Drugs designated as Breakthrough Therapies are eligible for the Fast Track designation features as described above, intensive guidance on an efficient drug development program beginning as early as Phase 1 trials, and a commitment from the FDA to involve senior managers and experienced review staff in a proactive collaborative, cross-disciplinary review.

Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Implications for NRX-101

Subsequent to the issuance of the SPA, in November 2018, the FDA also issued a Breakthrough Therapy designation to NRX-101. Breakthrough Therapy designation is awarded to drugs that have demonstrated preliminary evidence of efficacy for the treatment of a serious medical condition for which there is an unmet medical need.

Implications for ZYESAMI

The FDA has additionally awarded Fast Track designation to NRx Pharmaceuticals for development of our COVID-19 Drug in the treatment of Critical COVID-19 under IND 149152. Fast Track designation is awarded to drugs that have demonstrated preliminary evidence of efficacy for the treatment of a serious medical condition for which there is an unmet medical need.

Post-Approval Requirements

Drugs manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to recordkeeping, manufacturing, periodic reporting, product sampling and distribution, advertising and promotion, and reporting of adverse experiences with the product and drug shortages. After approval, most changes to the approved product, such as adding new indications or other labeling claims are subject to prior FDA review and approval. There also are continuing, annual user fee requirements for any marketed products and the establishments at which such products are manufactured, as well as new application fees for supplemental applications with clinical data.

The FDA may impose a number of post-approval requirements as a condition of approval of an NDA. For example, the FDA may require post-marketing testing, including Phase 4 clinical trials and surveillance to further assess and monitor the product's safety and effectiveness after commercialization.

In addition, drug manufacturers and other entities involved in the manufacture and distribution of approved drugs are required to register their establishments with the FDA and state agencies and list drugs manufactured at their facilities with the FDA. These facilities are further subject to periodic announced and unannounced inspections by the FDA and these state agencies for compliance with cGMP and other regulatory requirements. Changes to the manufacturing process are strictly regulated and may require prior approval by the FDA or notification to the FDA before or after being implemented. FDA regulations also require investigation and correction of any deviations from cGMP and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance.

Once an approval is granted, the FDA may withdraw the approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product becomes available in the market.

Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or failure to comply with regulatory requirements, may result in mandatory revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical trials to assess new safety risks; or imposition of distribution or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of the product, complete withdrawal of the product from the market or product recalls;
- fines, Warning Letters or Untitled Letters, holds or termination of post-approval clinical trials or FDA debarment;

- delay or refusal of the FDA to approve pending NDAs or supplements to approved NDAs, or suspension or revocation of product license approvals;
- regulatory authority, including the FDA, issued safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings about such products;
- mandated modifications to promotional material or issuance of corrective information;
- product seizure or detention, or refusal to permit the import or export of products; or
- injunctions or the imposition of civil or criminal penalties, including imprisonment, disgorgement and restitution, as well as consent decrees, corporate integrity agreements, deferred prosecution agreements and exclusion from federal healthcare programs.

The FDA strictly regulates marketing, labeling, advertising and promotion of products that are placed on the market. Although physicians, in the practice of medicine, may prescribe approved drugs for unapproved indications, pharmaceutical companies are prohibited from marketing or promoting their drug products for uses outside of the approved indications in the approved prescribing information. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses, and a company that is found to have improperly marketed or promotedoff-label uses may be subject to significant liability, including criminal and civil penalties under the FFDCA and False Claims Act, exclusion from participation in federal healthcare programs debarment from government contracts and refusal of future orders under existing contracts, and mandatory compliance programs under corporate integrity agreements or deferred prosecution agreements.

In addition, the distribution of prescription pharmaceutical products, including samples, is subject to the Prescription Drug Marketing Act ("PDMA"), which, among other things, regulates the distribution of drugs and drug samples at the federal level, and sets minimum standards for the registration and regulation of drug distributors by the states. Both the PDMA and state laws limit the distribution of prescription pharmaceutical product samples and impose requirements to ensure accountability in distribution.

Moreover, the recently enacted Drug Quality and Security Act, imposes new obligations on manufacturers of pharmaceutical products related to product tracking and tracing. Among the requirements of this new legislation, manufacturers will be required to provide certain information regarding drug products to individuals and entities to which product ownership is transferred, label drug products with a product identifier, and keep certain records regarding drug products. The transfer of information to subsequent product owners by manufacturers will eventually be required to be done electronically. Manufacturers will also be required to verify that purchasers of the manufacturers' products are appropriately licensed. Further, under this new legislation, manufactures will have drug product investigation, quarantine, disposition, and FDA and trading partner notification responsibilities related to counterfeit, diverted, stolen, and intentionally adulterated products such that they would result in serious adverse health consequences or death, as well as products that are the subject of fraudulent transactions or which are otherwise unfit for distribution such that they would be reasonably likely to result in serious health consequences or death.

DEA Regulation

We are required to evaluate the abuse potential of our product candidates. If any of our product candidates are considered controlled substances, we will need to comply with additional regulatory requirements. NRX-100 (ketamine) is a controlled substance with high abuse potential. Both of the components of NRX-101 are approved drugs (DCS and lurasidone) and neither is a controlled substance. We have completed abuse liability studies for DCS and identified no abuse potential. ZYESAMI is not a CNS-active drug so evaluation of abuse potential is not relevant.

Certain drug products may be regulated as "controlled substances" as defined in the Controlled Substances Act of 1970 and the DEA's implementing regulations. The DEA regulates controlled substances as Schedule I, II, III, IV or V substances. Schedule I substances by definition have no established medicinal use, and may not be

marketed or sold in the United States. A pharmaceutical product may be listed as Schedule II, III, IV or V, with Schedule II substances considered to present the highest risk of abuse and Schedule V substances the lowest relative risk of abuse among such substances. FDA provides a recommendation to DEA as to whether a drug should be classified as a controlled substance and the appropriate level of control. If DEA scheduling is required, a drug product may not be marketed until the scheduling process is completed, which could delay the launch of the product.

Depending on the Schedule, drug products may be subject to registration, security, recordkeeping, reporting, storage, distribution, importation, exportation, inventory, quota and other requirements administered by the DEA, which are directly applicable to product applicants, contract manufacturers and to distributors, prescribers and dispensers of controlled substances. The DEA regulates the handling of controlled substances through a closed chain of distribution. This control extends to the equipment and raw materials used in their manufacture and packaging in order to prevent loss and diversion into illicit channels of commerce.

Annual registration is required for any facility that manufactures, distributes, dispenses, imports or exports any controlled substance. The registration is specific to the particular location, activity and controlled substance schedule. For example, separate registrations are needed for import and manufacturing, and each registration will specify which schedules of controlled substances are authorized. Similarly, separate registrations are also required for separate facilities.

The DEA typically inspects a facility to review its security measures prior to issuing a registration and on a periodic basis. Security requirements vary by controlled substance schedule, with the most stringent requirements applying to Schedule I and Schedule II substances. Records must be maintained for the handling of all controlled substances, and periodic reports may be required to made to the DEA for the distribution of certain controlled substances. Reports must also be made for thefts or significant losses of any controlled substance. To enforce these requirements, the DEA conducts periodic inspections of registered establishments that handle controlled substances. Failure to maintain compliance with applicable requirements, particularly as manifested in loss or diversion, can result in administrative, civil or criminal enforcement. The DEA may seek civil penalties, refuse to renew necessary registrations, or initiate administrative proceedings to revoke those registrations. In some circumstances, violations could result in criminal proceedings or consent decrees. Individual states also independently regulate controlled substances.

Federal and State Healthcare related, Fraud and Abuse and Data Privacy and Security Laws and Regulations

In addition to FDA restrictions on marketing of pharmaceutical products, federal and state fraud and abuse, and other laws regulations, and requirements restrict business practices in the biopharmaceutical industry. These laws include anti-kickback and false claims laws and regulations, state and federal transparency laws regarding payments or other items of value provided to health care professionals, as well as data privacy and security laws and regulations and other requirements applicable to the healthcare industry, including pharmaceutical manufacturers. There are also laws, regulations, and requirements applicable to the award and performance of federal contracts and grants.

The federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce or in return for purchasing, leasing, ordering, or arranging for or recommending the purchase, lease, or order of any item or service reimbursable, in whole or in part, under Medicare, Medicaid or other federal healthcare programs. The term “remuneration” has been broadly interpreted to include anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, formulary managers, and beneficiaries on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are narrowly drawn. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases, or recommendations may be subject to scrutiny if they do not meet the requirements of a statutory or regulatory exception or safe harbor. Several courts have interpreted the statute’s intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the statute has been violated.

The reach of the Anti-Kickback Statute was also broadened by the Affordable Care Act, which, among other things, amended the intent requirement of the federal Anti-Kickback Statute and certain provisions of the criminal health care fraud statute (discussed below) such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the Affordable Care Act provides that the government may assert that a claim for payment for items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act. Penalties for violation of the Anti-Kickback Statute include criminal fines, imprisonment, civil penalties and damages, exclusion from participation in federal healthcare programs and corporate integrity agreements or deferred prosecution agreements. Conviction or civil judgments are also grounds for debarment from government contracts.

The federal civil False Claims Act prohibits any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government, including payments under a federal grant. A claim includes "any request or demand" for money or property presented to the United States government. The False Claims Act also applies to false submissions that cause the government to be paid less than the amount to which it is entitled, such as a rebate. Intent to deceive is not required to establish liability under the civil False Claims Act. Several pharmaceutical and other healthcare companies have been sued under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Companies have also been sued for causing false claims to be submitted because of the companies' marketing of products for unapproved, or off-label, uses. In addition, federal health care programs require drug manufacturers to report drug pricing information, which is used to quantify discounts and establish reimbursement rates. Several pharmaceutical and other healthcare companies have been sued for reporting allegedly false pricing information, which caused the manufacturer to understate rebates owed or, when used to determine reimbursement rates, caused overpayment to providers. Violations of the civil False Claims Act may result in civil penalties and damages as well as exclusion from federal healthcare programs and corporate integrity agreements or deferred prosecution agreements. The government may further prosecute conduct constituting a false claim under the criminal False Claims Act. The criminal False Claims Act prohibits the making or presenting of a claim to the government knowing such claim to be false, fictitious, or fraudulent and, unlike the civil False Claims Act, requires proof of intent to submit a false claim. Violations of the criminal False Claims Act can result in criminal fines and/or imprisonment, as well as exclusion from participation in federal healthcare programs. Conviction or civil judgments and other conduct are also grounds for debarment from government contracts and grants.

HIPAA also created federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payers, knowingly and willfully embezzling or stealing from a health care benefit program, willfully obstructing a criminal investigation of a health care offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. As discussed above, the Affordable Care Act amended the intent standard for certain of HIPAA's healthcare fraud provisions such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. Violations of HIPAA's fraud and abuse provisions may result in fines or imprisonment, as well as exclusion from participation in federal healthcare programs, depending on the conduct in question. Also, many states have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

The civil monetary penalties statute imposes penalties against any person or entity who, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

The Veterans Health Care Act requires manufacturers of covered drugs to offer them for sale on the Federal Supply Schedule, which requires compliance with applicable federal procurement laws and regulations and subjects us to contractual remedies as well as administrative, civil and criminal sanctions.

In addition, there has been a recent trend of increased federal and state regulation of payments made to physicians and other health care providers. The Affordable Care Act created new federal requirements for reporting, by applicable manufacturers of covered drugs, payments and other transfers of value to physicians and teaching hospitals, and ownership and investment interests held by physicians and other healthcare providers and their

immediate family members. Certain states also require implementation of commercial compliance programs and compliance with the pharmaceutical industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government, or otherwise restrict payments or the provision of other items of value that may be made to healthcare providers and other potential referral sources; impose restrictions on marketing practices; and/or require drug manufacturers to track and report information related to payments, gifts and other items of value to physicians and other healthcare providers.

We may also be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended by HITECH and its implementing regulations, imposes specified requirements relating to the privacy, security and transmission of individually identifiable health information. Penalties for violating HIPAA include civil penalties, criminal penalties and imprisonment. Among other things, HITECH, through its implementing regulations, makes HIPAA's privacy and security standards directly applicable to "business associates," defined as a person or organization, other than a member of a covered entity's workforce, that creates, receives, maintains or transmits protected health information on behalf of a covered entity for a function or activity regulated by HIPAA. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions.

In addition, other federal and state laws govern the privacy and security of health and other information in certain circumstances, many of which differ from each other in significant ways and may not have the same requirements, thus complicating compliance efforts.

To the extent that any of our products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

Coverage and Reimbursement

The commercial success of our product candidates and our ability to commercialize any approved product candidates successfully will depend in part on the extent to which governmental authorities, private health insurers and other third-party payers provide coverage for and establish adequate reimbursement levels for our therapeutic product candidates. In the United States, the European Union and other potentially significant markets for our product candidates, government authorities and third-party payers are increasingly imposing additional requirements and restrictions on coverage, attempting to limit reimbursement levels or regulate the price of drugs and other medical products and services, particularly for new and innovative products and therapies, which often has resulted in average selling prices lower than they would otherwise be. For example, in the United States, federal and state governments reimburse covered prescription drugs at varying rates generally below average wholesale price. Federal programs also impose price controls through mandatory ceiling prices on purchases by federal agencies and federally funded hospitals and clinics and mandatory rebates on retail pharmacy prescriptions paid by Medicaid and Tricare. These restrictions and limitations influence the purchase of healthcare services and products. Legislative proposals to reform healthcare or reduce costs under government programs may result in lower reimbursement for our product candidates or exclusion of our product candidates from coverage. Moreover, the Medicare and Medicaid programs increasingly are used as models for how private payers and other governmental payers develop their coverage and reimbursement policies.

In addition, the increased emphasis on managed healthcare in the United States and on country and regional pricing and reimbursement controls in the European Union will put additional pressure on product pricing, reimbursement and utilization, which may adversely affect our future product sales and results of operations. These pressures can arise from rules and practices of managed care groups, competition within therapeutic classes, availability of generic equivalents, judicial decisions and governmental laws and regulations related to Medicare, Medicaid and healthcare reform, coverage and reimbursement policies and pricing in general. The cost containment measures that healthcare payers and providers are instituting and any healthcare reform implemented in the future could significantly reduce our revenues from the sale of any approved product candidates. We cannot provide any assurances that we will be able to obtain and maintain third-party coverage or adequate reimbursement for our product candidates in whole or in part.

Impact of Healthcare Reform on Coverage, Reimbursement, and Pricing

The Medicare Modernization Act imposed new requirements for the distribution and pricing of prescription drugs for Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities that provide coverage of outpatient prescription, pharmacy drugs pursuant to federal regulations. Part D plans include both standalone prescription drug benefit plans and prescription drug coverage as a supplement to Medicare Advantage plans. Unlike Medicare Part A and B, Part D coverage is not standardized. In general, Part D prescription drug plan sponsors have flexibility regarding coverage of Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class, with certain exceptions. Any formulary used by a Part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for any products for which we receive marketing approval. However, any negotiated prices for our future products covered by a Part D prescription drug plan will likely be discounted, thereby lowering the net price realized on our sales to pharmacies. Moreover, while the Medicare Modernization Act applies only to drug benefits for Medicare beneficiaries, private payers often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from Medicare Part D may result in a similar reduction in payments from non-governmental payers.

The American Recovery and Reinvestment Act of 2009 provides funding for the federal government to compare the effectiveness of different treatments for the same illness. A plan for the research will be developed by the Department of Health and Human Services, the Agency for Healthcare Research and Quality and the NIH, and periodic reports on the status of the research and related expenditures will be made to Congress. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private payers, it is not clear what effect, if any, the research will have on the sales of any product, if any such product or the condition that it is intended to treat is the subject of a study. It is also possible that comparative effectiveness research demonstrating benefits in a competitor's product could adversely affect the sales of our product candidates. If third-party payers do not consider our product candidates to be cost-effective compared to other available therapies, they may not cover our product candidates, once approved, as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis.

The United States and some foreign jurisdictions are considering enacting or have enacted a number of additional legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our products profitably. Among policy makers and payers in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives, including, most recently, the Affordable Care Act, which became law in March 2010 and substantially changes the way healthcare is financed by both governmental and private insurers. Among other cost containment measures, the Affordable Care Act establishes an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic agents; a new Medicare Part D coverage gap discount program; expansion of Medicaid benefits and a new formula that increases the rebates a manufacturer must pay under the Medicaid Drug Rebate Program; and expansion of the 340B drug discount program that mandates discounts to certain hospitals, community centers and other qualifying providers. In the future, there may continue to be additional proposals relating to the reform of the United States healthcare system, some of which could further limit the prices we are able to charge or the amounts of reimbursement available for our product candidates once they are approved.

The Foreign Corrupt Practices Act (the "FCPA")

The FCPA prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in

obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring us to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations. Activities that violate the FCPA, even if they occur wholly outside the United States, can result in criminal and civil fines, imprisonment, disgorgement, oversight, and debarment from government contracts.

Exclusivity and Approval of Competing Products

Hatch-Waxman Patent Exclusivity

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent with claims that cover the applicant's product or a method of using the product. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential competitors in support of approval of an abbreviated new drug application ("ANDA") or 505(b)(2) NDA. Generally, an ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths, dosage form and route of administration as the listed drug and has been shown to be bioequivalent through in vitro or in vivo testing or otherwise to the listed drug. ANDA applicants are not required to conduct or submit results of preclinical or clinical tests to prove the safety or effectiveness of their drug product, other than the requirement for bioequivalence testing. Drugs approved in this way are commonly referred to as "generic equivalents" to the listed drug, and can often be substituted by pharmacists under prescriptions written for the reference listed drug. 505(b)(2) NDAs generally are submitted for changes to a previously approved drug product, such as a new dosage form or indication.

The ANDA or 505(b)(2) NDA applicant is required to provide a certification to the FDA in the product application concerning any patents listed for the approved product in the FDA's Orange Book, except for patents covering methods of use for which the applicant is not seeking approval. Specifically, the applicant must certify with respect to each patent that:

- the required patent information has not been filed;
- the listed patent has expired;
- the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or
- the listed patent is invalid, unenforceable, or will not be infringed by the new product.

Generally, the ANDA or 505(b)(2) NDA cannot be approved until all listed patents have expired, except when the ANDA or 505(b)(2) NDA applicant challenges a listed patent or if the listed patent is a patented method of use for which approval is not being sought. A certification that the proposed product will not infringe the already approved product's listed patents or that such patents are invalid or unenforceable is called a Paragraph IV certification. We may seek Paragraph IV Certification for our product candidates. If the applicant does not challenge the listed patents or does not indicate that it is not seeking approval of a patented method of use, the ANDA or 505(b)(2) NDA application will not be approved until all the listed patents claiming the referenced product have expired.

If the ANDA or 505(b)(2) NDA applicant has provided a Paragraph IV certification to the FDA, the applicant must also send notice of the Paragraph IV certification to the NDA and patent holders once the application has been accepted for filing by the FDA. The NDA and patent holders may then initiate a patent infringement lawsuit in response to the notice of the Paragraph IV certification. The filing of a patent infringement lawsuit within 45 days after the receipt of notice of the Paragraph IV certification automatically prevents the FDA from approving the ANDA or 505(b)(2) NDA until the earlier of 30 months, expiration of the patent, settlement of the lawsuit, a decision in the infringement case that is favorable to the ANDA applicant or other period determined by a court.

Hatch-Waxman Non-Patent Exclusivity

Market and data exclusivity provisions under the FFDCA also can delay the submission or the approval of certain applications for competing products. The FFDCA provides a five-year period of non-patent data exclusivity within the United States to the first applicant to gain approval of an NDA for a new chemical entity.

A drug is a new chemical entity if the FDA has not previously approved any other new drug containing the same active moiety, which is the molecule or ion responsible for the therapeutic activity of the drug substance. During the exclusivity period, the FDA may not accept for review an ANDA or a 505(b)(2) NDA submitted by another company that contains the previously approved active moiety. However, an ANDA or 505(b)(2) NDA may be submitted after four years if it contains a certification of patent invalidity or non-infringement.

The FFDCA also provides three years of marketing exclusivity for an NDA, 505(b)(2) NDA, or supplement to an existing NDA or 505(b)(2) NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant, are deemed by the FDA to be essential to the approval of the application or supplement. Three-year exclusivity may be awarded for changes to a previously approved drug product, such as new indications, dosages, strengths or dosage forms of an existing drug. This three-year exclusivity covers only the conditions of use associated with the new clinical investigations and, as a general matter, does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for generic versions of the original, unmodified drug product. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA; however, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the preclinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Pediatric Exclusivity

Pediatric exclusivity is another type of non-patent marketing exclusivity in the United States and, if granted, provides for the attachment of an additional six months of marketing protection to the term of any existing regulatory exclusivity, including the non-patent exclusivity period described above. This six-month exclusivity may be granted if an NDA sponsor submits pediatric data that fairly respond to a written request from the FDA for such data. The data do not need to show the product to be effective in the pediatric population studied; rather, if the clinical trial is deemed to fairly respond to the FDA's request, the additional protection is granted. If reports of requested pediatric studies are submitted to and accepted by the FDA within the statutory time limits, whatever statutory or regulatory periods of exclusivity or Orange Book listed patent protection cover the drug are extended by six months. This is not a patent term extension, but it effectively extends the regulatory period during which the FDA cannot approve an ANDA or 505(b)(2) application owing to regulatory exclusivity or listed patents.

Orphan Drug Designation and Exclusivity

The Orphan Drug Act provides incentives for the development of drugs intended to treat rare diseases or conditions, which generally are diseases or conditions affecting less than 200,000 individuals annually in the United States, or affecting more than 200,000 in the United States and for which there is no reasonable expectation that the cost of developing and making the drug available in the United States will be recovered from United States sales.

Additionally, sponsors must present a plausible hypothesis for clinical superiority to obtain orphan drug designation if there is a drug already approved by the FDA that is intended for the same indication and that is considered by the FDA to be the same drug as the already approved drug. This hypothesis must be demonstrated to obtain orphan drug exclusivity. Orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical study costs, tax advantages, and user-fee waivers. In addition, if a product receives FDA approval for the indication for which it has orphan drug designation, the product is generally entitled to orphan drug exclusivity, which means the FDA may not approve any other application to market the same drug for the same indication for a period of seven years, except in limited circumstances, such as a showing of clinical superiority over the product with orphan exclusivity. *See* "Risk Factors-Risks Related to NRx Pharmaceuticals' Business and Industry-We do not anticipate maintaining orphan drug protection for the treatment of COVID-19."

Foreign Regulation

In order to market any product outside of the United States, we would need to comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy and governing, among other things, clinical trials, marketing authorization, commercial sales and distribution of our products. For example, in the European Union, we must obtain authorization of a clinical trial application in each member state in which we intend to conduct a clinical trial. Whether or not we obtain FDA approval for a product, we would need to obtain the necessary approvals by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The approval process varies from country to country and can involve additional product testing and additional administrative review periods. The time required to obtain approval in other countries might differ from and be longer than that required to obtain FDA approval. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may negatively impact the regulatory process in others.

European Union Drug Approval Process

To obtain marketing authorization of a drug in the European Union, we may submit MAAs either under theso-called centralized or national authorization procedures.

Centralized procedure

The centralized procedure provides for the grant of a single marketing authorization following a favorable opinion by the European Medicines Agency that is valid in all European Union member states, as well as Iceland, Liechtenstein and Norway. The centralized procedure is compulsory for medicines produced by specified biotechnological processes, products designated as orphan medicinal products, and products with a new active substance indicated for the treatment of specified diseases, such as HIV/AIDS, cancer, diabetes, neurodegenerative disorders or autoimmune diseases and other immune dysfunctions. The centralized procedure is optional for products that represent a significant therapeutic, scientific or technical innovation, or whose authorization would be in the interest of public health. Under the centralized procedure the maximum timeframe for the evaluation of an MAA by the European Medicines Agency is 210 days, excluding clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the Committee of Medicinal Products for Human Use (the "CHMP"). Accelerated assessment might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of a major public health interest, particularly from the point of view of therapeutic innovation. The timeframe for the evaluation of an MAA under the accelerated assessment procedure is of 150 days, excluding stop-clocks.

National authorization procedures

There are also two other possible routes to authorize medicinal products in several European Union countries, which are available for investigational medicinal products that fall outside the scope of the centralized procedure:

- *Decentralized procedure.* Using the decentralized procedure, an applicant may apply for simultaneous authorization in more than one European Union country of medicinal products that have not yet been authorized in any European Union country and that do not fall within the mandatory scope of the centralized procedure.
- *Mutual recognition procedure.* In the mutual recognition procedure, a medicine is first authorized in one European Union Member State, in accordance with the national procedures of that country. Following this, further marketing authorizations can be sought from other European Union countries in a procedure whereby the countries concerned agree to recognize the validity of the original, national marketing authorization.

In the European Union, new products authorized for marketing (*i.e.*, reference products) qualify for eight years of data exclusivity and an additional two years of market exclusivity upon marketing authorization. The data exclusivity period prevents generic applicants from relying on the preclinical and clinical trial data contained in the dossier of the reference product when applying for a generic marketing authorization in the European Union during a period of eight years from the data on which the reference product was first authorized in the European Union. The market exclusivity period prevents a successful generic applicant from commercializing its product in the European Union until ten years have elapsed from the initial authorization of the reference product in the European Union. The ten-year market exclusivity period can be extended to a maximum of eleven years if, during the first eight years of those ten years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization, are held to bring a significant clinical benefit in comparison with existing therapies.

MANAGEMENT

The following table sets forth, as of the date of this prospectus, certain information regarding our executive officers and directors who are responsible for overseeing the management of our business.

Name	Age	Position
Executive Officers:		
Jonathan C. Javitt, M.D., M.P.H.	64	Chief Executive Officer, Chairman and Director
William Fricker	57	Chief Financial Officer and Treasurer
Robert Besthof, MIM	55	Chief Commercial and Patient Officer and Head of Operations
Alessandra Daigneault, Esq.	57	General Counsel and Secretary
Non-Employee Directors:		
Sherry A. Glied, Ph.D.	59	Director
Patrick J. Flynn	72	Director
Daniel Troy	61	Director
Aaron Gorovitz	62	Director
Chaim Hurvitz	60	Director
H.R. McMaster	58	Director

Executive Officers

Jonathan C. Javitt, M.D., M.P.H. Dr. Javitt has served as our Chief Executive Officer and Chairman of our board of directors since May 2021. He served as Chairman of the Board and the Chief Executive Officer of NeuroRx from its founding in 2015. Prior to that, Dr. Javitt served as Chairman of the Board and the Chief Executive Officer of NeuroRx since its founding in 2015. Prior to starting NeuroRx, he participated in leading drug and medical device development and commercialization projects for Allergan, Alcon, Eyetech, Merck, Novartis, Pfizer, and Pharmacia. He has played leadership roles in seven successful healthcare IT and biopharma start-up companies. He was appointed to healthcare leadership roles under President Reagan, George H.W. Bush, Clinton and George W. Bush. During the Reagan and Bush ’41 administrations, he was designated as an Expert Consultant to the Department of Health and Human Services. President Clinton designated him as a Special Government Employee of the White House Executive Office of the President to serve on the 1993 Health Reform Task Force. Under President George W. Bush, he was commissioned to lead the Healthcare Committee of the President’s Information Technology Advisory Committee and to serve as a Special Employee of the Undersecretary of Defense. Dr. Javitt has published more than 200 scientific works in the areas of health outcomes and pharmacoeconomics that have been cited more than 25,000 times. Dr. Javitt holds an AB with Honors from Princeton University, a Doctor of Medicine from Cornell University and a Masters of Public Health from the Harvard Chan School of Public Health. In 2015, he was designated an Alumnus of Merit, the highest honor bestowed by Harvard University to graduates of the School of Public Health. He continues to serve as an adjunct Professor of Ophthalmology at Johns Hopkins School of Medicine and as a Senior Fellow of the Potomac Institute for Policy Studies. We believe Dr. Javitt is qualified to serve on our board of directors due to his extensive experience leading NeuroRx and in the pharmaceutical industry.

William Fricker. Mr. Fricker has served as our Chief Financial Officer and Treasurer since May 2021. Prior to that, Mr. Fricker served as the Chief Financial Officer of NeuroRx from November 2020. Prior to joining NeuroRx, he was Vice President, Finance & Principal Accounting Officer for Immunomedics Inc. from February 2018 to October 2020, where he built out the finance department to support the transition from a clinical-stage organization to a fully commercial biopharmaceutical company with a market capitalization of more than $20 billion. From the end of 2015 until the beginning of 2018, he operated as a financial consultant and interim finance director assisting large pharmaceutical, medical device and chemical companies. Prior to that, he served as Vice President, Global Controller and Chief Accounting Officer for J M Huber Corporation, a $2 billion global chemical and engineering company from 2007 to 2015. Mr. Fricker is a Certified Public Accountant in the state of Pennsylvania (inactive) and earned a Bachelor of Science from Penn State University and a Master of Business Administration from Villanova University.

Robert Besthof, MIM. Mr. Besthof has served as our Chief Commercial and Patient Officer and Head of Operations since May 2021. Prior to that, Mr. Besthof served as the Chief Commercial Officer of NeuroRx from March 2016. Mr. Bestof is a seasoned professional with 20 years of experience in biopharma marketing and operations, including at Pfizer, Wyeth, and Eli Lilly. Mr. Bestof has held various positions at Pfizer since 2004, including his most recent role as Vice President of Global Commercial Development for Neuroscience and Pain products at Pfizer. He has a track record of leadership in positions of increasing responsibility, including: profit and loss for marketing and sales and has enabled the rapid growth of pharmaceutical pipelines across multiple therapeutic areas. He has advanced and shaped the commercial paths for an aggregate of 15 Phase II and III compounds resulting in multiple product launches. Prior to joining the pharmaceutical industry, Mr. Bestof worked for Deutsche Bank and in consulting. He holds a B.A. in Economics from Case Western Reserve University, and a Masters of International Management from The Thunderbird School of Global Management.

Alessandra Daigneault, Esq. Ms. Daigneault has served as our General Counsel and Secretary since May 2021. Prior to that, Ms. Daigneault served as the General Counsel of NeuroRx from April 2021. Prior to joining NeuroRx, Ms. Daigneault was co-founder and Chief Operating Officer of Quantum Governance LLC, where she continues to serve as a director. She also served as Vice President and Chief Legal Counsel for Teligent, Inc. and its successor companies, First Avenue Networks and FiberTower Corporation, all publicly traded telecommunications companies, from October 2000 to May 2008. Ms. Daigneault began her legal career with Milbank LLP and was a Partner at the Washington, D.C. law firm of Tucker, Flyer & Lewis (now Venable LLP). Ms. Daigneault holds a Bachelor of Science, Magna Cum Laude, from Georgetown University and a Juris Doctor from Georgetown University Law Center.

Non-Employee Directors

Sherry A. Glied, Ph.D. Dr. Glied has served as a member of our board of directors since May 2021. Dr. Glied served as a member of NeuroRx's board of directors from December 2015. Dr. Glied has served as the Dean of New York University's Robert F. Wagner Graduate School of Public Service since August 2013. From 1989 to August 2013, Dr. Glied was the Professor of Health Policy and Management at Columbia University's Mailman School of Public Health, where she served as the Chair of the Department of Health Policy and Management from 1998 to 2009. In June 2010, Dr. Glied was confirmed by the U.S. Senate as Assistant Secretary for Planning and Evaluation at the Department of Health and Human Services, serving in that capacity from July 2010 through August 2012. She has previously also served as Assistant Secretary of Health under President Obama and as a member of the President's Council of Economic Advisors under President Bush. She is one of the world's leading experts on Mental Health Policy. She has been elected to the Institute of Medicine of the National Academy of Sciences, the National Academy of Social Insurance, and the Board of Academy Health, and has been a member of the Congressional Budget Office's Panel of Health Advisers and a research associate of the National Bureau of Economic Research. She is co-editor, with Peter C. Smith, of The Oxford Handbook of Health Economics, which was published by the Oxford University Press in 2011. Dr. Glied holds a B.A. in Economics from Yale University, a Master's degree in Economics from the University of Toronto and a Ph.D. in Economics from Harvard University. We believe Dr. Glied is qualified to serve on our board due to her vast experience in public health, and in particular in Mental Health Policy.

Patrick J. Flynn. Mr. Flynn has served as a member of our board of directors since May 2021. Mr. Flynn served as a member of the NeuroRx board of directors from 2017. Mr. Flynn is an entrepreneur with more than 35 years of senior executive experience. He has provided leadership to numerous successful organizations including start-ups and growth-stage companies and has served in a variety of roles, including Executive Chairman, board member, CEO, COO, CFO and advisor. Mr. Flynn currently serves as the COO of Good Measures where he is responsible for the day-to-day operations of the company's innovative approach to healthcare and nutrition services. Prior to joining Good Measures, Mr. Flynn was the co-founder of Predilytics, Inc. and served as Executive Chairman. Before joining Predilytics, Mr. Flynn contributed his expertise as COO and then as CEO to Health Dialog, where he helped build the business from an early-stage healthcare services organization to one of the world's leading providers of healthcare analytics, healthcare services and decision support. Prior to this role, Flynn

was a co-founder of Symmetrix, a management consulting firm specializing in healthcare and financial services. Mr. Flynn began his career with Bank of America where he held several positions over the course of 15 years, including Vice President of World Banking and Vice President of Risk Management. Mr. Flynn earned his BS in Finance from the Wharton School at the University of Pennslvania. We believe Mr. Flynn is qualified to serve on our board of directors due to his extensive finance and corporate management experience in the healthcare industry.

Daniel Troy. Mr. Troy has served as a member of our board of directors since May 2021. Mr. Troy served as a member of the NeuroRx board of directors from 2018. Mr. Troy is Executive Vice President, Chief Legal Officer and General Counsel of Valo Health. He served as General Counsel of GlaxoSmithKline from 2008 until 2018. Previously, he was partner in the FDA practice at Sidley Austin. In 2001, he was appointed by President Bush to serve as Chief Counsel for the US Food and Drug Administration, where he was a primary liaison to the White House and the US Department of Health and Human Services. From 2006 to 2007, Mr. Troy chaired the American Bar Association's Section of Administrative Law and was an adjunct scholar at the American Enterprise Institute in Washington, DC. Prior to entering federal service, he practiced constitutional, administrative, and appellate law at Wiley Rein and Fielding, served in the Office of Legal Counsel at the US Department of Justice, and clerked for DC Circuit Judge Robert H. Bork. Mr. Troy has a Bachelor of Science from Cornell University and a Juris Doctor from Columbia Law School, where he was a Kent and Stone Scholar. We believe Mr. Troy is qualified to serve on our board of directors due to his extensive experience with the FDA and in the pharmaceutical industry.

Aaron Gorovitz. Mr. Gorovitz has served as a member of our board of directors since May 2021. Mr. Gorovitz served as a member of the NeuroRx board of directors from 2016. He is a partner and General Counsel of the AHG Group. In addition to his 25 years of legal experience in complex commercial transactions, he has considerable involvement in early-stage biotechnology and health information technology companies. Mr. Gorovitz has a BA from Muhlenberg College and a Juris Doctor from George Washington University Law School. We believe Mr. Gorovitz is qualified to serve on our board of directors due to his extensive experience in transactional law and corporate governance.

Chaim Hurvitz. Mr. Hurvitz has served as a member of our board of directors since May 2021. He served as a member of the NeuroRx board of directors from May 2015. Mr. Hurvitz has served as the Chief Executive Officer of CH Health, a private venture capital firm, since May 2011. Mr. Hurvitz previously served as a member of the board of directors of Teva Pharmaceuticals Industries Ltd. from October 2010 to July 2014. Previously, he was a member of the senior management of Teva Pharmaceuticals Industries Ltd., serving as the President of Teva International Group from 2002 until 2010, as President and Chief Executive Officer of Teva Pharmaceuticals Europe from 1992 to 1999 and as Vice President—Israeli Pharmaceutical Sales from 1999 until 2002. Mr. Hurvitz is a founding investor and a director of Galmed Pharmaceuticals Ltd. Mr. Hurvitz presently serves as a member of the management of the Manufacturers Association of Israel and head of its pharmaceutical branch. Mr. Hurvitz holds a B.A. from Tel Aviv University. We believe Mr. Hurvitz is qualified to serve on our board of directors due to his extensive experience in the pharmaceutical industry.

Herbert "H.R." McMaster. Mr. McMaster has served as a member of our board of directors since May 2021. Mr. McMaster is a former Assistant to the President for National Security Affairs. He served as a commissioned officer in the United States Army for thirty-four years before retiring as a Lieutenant General in June 2018. He is currently a Lecturer in Management at Stanford University Graduate School of Business and a non-executive director of Zoom Video Communications, Inc. From 2014 to 2017, Mr. McMaster designed the future army as the director of the Army Capabilities Integration Center and the deputy commanding general of the US Army Training and Doctrine Command (TRADOC). Mr. McMaster holds a Ph.D. in Military History from the University of North Carolina at Chapel Hill and a Bachelor of Science from the United States Military Academy at West Point. We believe Mr. McMaster is qualified to serve on our board of directors due to his extensive leadership and government experience.

Board Composition and Election of Directors

Director Independence

Jonathan Javitt and Daniel Javitt control a majority of the voting power of the Common Stock. As a result, NRx Pharmaceuticals is a "controlled company" within the meaning of the corporate governance standards of Nasdaq. Under these rules, a company of which more than 50% of the voting power is held by an individual, group or another company is a "controlled company" and may elect not to comply with certain corporate governance requirements, including:

- the requirement that a majority of NRx Pharmaceuticals' board of directors consist of "independent directors" as defined under the rules of Nasdaq;
- the requirement that NRx Pharmaceuticals have a compensation committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities;
- the requirement that NRx Pharmaceuticals have a nominating and corporate governance committee that is composed entirely of independent directors with a written charter addressing the committee's purpose and responsibilities; and
- the requirement for an annual performance evaluation of the compensation and nominating and corporate governance committees.

Our board of directors has determined that Sherry A. Glied, Patrick J. Flynn, Daniel Troy, Aaron Gorovitz and Chaim Hurvitz are "independent directors" as defined in the Nasdaq listing standards and applicable SEC rules.

Classified Board of Directors

In accordance with our Charter, our board of directors is divided into three classes with staggered, three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire are elected to serve from the time of election and qualification until the third annual meeting following election. Our directors are divided among the three classes as follows:

- the Class I directors are Chaim Hurvitz and Daniel Troy, and their terms will expire at our 2022 annual meeting of stockholders;
- the Class II directors are Sherry Glied and Aaron Gorovitz, and their terms will expire at our 2023 annual meeting of stockholders; and
- the Class III directors are Patrick Flynn, Jonathan Javitt and H.R. McMaster, and their terms will expire at the 2024 annual meeting of stockholders.

Our Charter provides that the authorized number of directors may be changed only by resolution of the board of directors. Any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control of our company. Subject to the special rights of the holders of one or more outstanding series of preferred stock to elect directors, our directors may be removed only for cause by the affirmative vote of the holders of at least 75% of our outstanding voting stock entitled to vote in the election of directors.

Board Committees

Our board of directors directs the management of our business and affairs, as provided by Delaware law, and conducts its business through meetings of the board of directors and standing committees. We have a standing audit committee, nominating and corporate governance committee and compensation committee. In addition, from time to time, special committees may be established under the direction of the board of directors when necessary to address specific issues.

Audit Committee

Our audit committee is responsible for, among other things:

- appointing, compensating, retaining, evaluating, terminating and overseeing our independent registered public accounting firm;
- discussing with our independent registered public accounting firm their independence from management;
- reviewing, with our independent registered public accounting firm, the scope and results of their audit;
- approving all audit and permissible non-audit services to be performed by our independent registered public accounting firm;
- overseeing the financial reporting process and discussing with management and our independent registered public accounting firm the quarterly and annual financial statements that we file with the SEC;
- overseeing our financial and accounting controls and compliance with legal and regulatory requirements;
- reviewing our policies on risk assessment and risk management;
- reviewing related person transactions; and
- establishing procedures for the confidential anonymous submission of concerns regarding questionable accounting, internal controls or auditing matters.

Our audit committee consists of Messrs. Flynn, Gorovitz and Hurvitz, with Mr. Flynn serving as chair. Rule10A-3 of the Exchange Act and the Nasdaq rules require that our audit committee be composed entirely of independent members. Our board of directors has affirmatively determined that Messrs. Flynn, Gorovitz and Hurvitz each meet the definition of "independent director" for purposes of serving on the audit committee under Rule 10A-3 of the Exchange Act and the Nasdaq rules. Each member of our audit committee also meets the financial literacy requirements of Nasdaq listing standards. In addition, our board of directors has determined that Messrs. Flynn, Gorovitz and Hurvitz each qualify as an "audit committee financial expert," as such term is defined in Item 407(d)(5) of Regulation S-K. Our board of directors has adopted a written charter for the audit committee.

Compensation Committee

Our compensation committee is responsible for, among other things:

- reviewing and approving the corporate goals and objectives, evaluating the performance of and reviewing and approving, (either alone or, if directed by our board of directors, in conjunction with a majority of the independent members of the board of directors) the compensation of our Chief Executive Officer;

- overseeing an evaluation of the performance of and reviewing and setting or making recommendations to our board of directors regarding the compensation of our other executive officers;
- reviewing and approving or making recommendations to our board of directors regarding our incentive compensation and equity-based plans, policies and programs;
- reviewing and approving all employment agreement and severance arrangements for our executive officers;
- making recommendations to our board of directors regarding the compensation of our directors; and
- retaining and overseeing any compensation consultants.

Our compensation committee consists of Messrs. Flynn, Gorovitz and Troy, with Mr. Flynn serving as chair. Our board of directors has affirmatively determined that Messrs. Flynn, Gorovitz and Troy each meet the definition of "independent director" for purposes of serving on the compensation committee under the Nasdaq rules, including the heightened independence standards for members of a compensation committee, and are "non-employee directors" as defined in Rule 16b-3 of the Exchange Act. Our board of directors has adopted a written charter for the compensation committee.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee is responsible for, among other things:

- identifying individuals qualified to become members of our board of directors, consistent with criteria approved by our board of directors;
- overseeing succession planning for our Chief Executive Officer and other executive officers;
- periodically reviewing our board of directors' leadership structure and recommending any proposed changes to our board of directors;
- overseeing an annual evaluation of the effectiveness of our board of directors and its committees; and
- developing and recommending to our board of directors a set of corporate governance guidelines.

Our nominating and corporate governance committee consists of Mr. Troy, Dr. Glied and Dr. Javitt, with Mr. Troy serving as chair. Our board of directors has affirmatively determined that Mr. Troy, Dr. Glied and Dr. Javitt each meet the definition of "independent director" under the Nasdaq rules. As a "controlled company" within the meaning of the corporate governance standards of Nasdaq, we are permitted to, and have elected not to, comply with the requirement that NRx Pharmaceuticals have a nominating and corporate governance committee that is composed entirely of independent directors. Our board of directors has adopted a written charter for the nominating and corporate governance committee.

Risk Oversight

Our board of directors is responsible for overseeing our risk management process. Our board of directors focuses on our general risk management strategy, the most significant risks facing us, and oversees the implementation of risk mitigation strategies by management. Our audit committee is also responsible for discussing our policies with respect to risk assessment and risk management. Our board of directors believes its administration of its risk oversight function has not negatively affected our board of directors' leadership structure.

Compensation Committee Interlocks and Insider Participation

None of our executive officers serves as a member of the board of directors or compensation committee (or other committee performing equivalent functions) of any entity that has one or more executive officers serving on our board of directors or compensation committee.

Code of Business Conduct and Ethics

We adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A copy of the code is posted on our corporate website at *www.nrxpharma.com*. In addition, we intend to post on our website all disclosures that are required by law or the Nasdaq listing standards concerning any amendments to, or waivers from, any provision of the code. The information contained in, or accessible through, our website does not constitute a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

EXECUTIVE AND DIRECTOR COMPENSATION

Except as otherwise noted, this section presents the executive and director compensation of NeuroRx prior to the Business Combination.

Executive Officer and Director Compensation

Overview

Our "Named Executive Officers" for the year ended December 31, 2020, include Jonathan Javitt, our Chief Executive Officer, Robert Bestof, our Chief Commercial and Patient Officer and Head of Operations, and Brian Del Buono, our Chief Legal Officer. Mr. Del Buono entered into a consulting agreement with NeuroRx dated as of January 1, 2021 and is no longer an employee of NeuroRx. In connection with Mr. Del Buono's mutual transition from a full time NeuroRx employee to a part time consultant for NeuroRx, he was not entitled to and therefore did not request or receive the Del Buono Severance Pay (as defined below).

2020 Summary Compensation Table

The following table presents information regarding the total compensation of our Named Executive Officers for the year ended December 31, 2020.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Option Awards ($) (1)	Non-Equity Incentive Plan Compensation ($)(2)	All Other Compensation ($)	Total ($)
Jonathan Javitt *Chief Executive Officer, Chairman and Director*	2020	$236,459	$220,000	—	—	$ 14,586(3)	$471,045
Robert Besthof *Chief Commercial and Patient Officer and Head of Operations*	2020	$214,375	—	$ 744,114	—	—	$958,489
Brian Del Buono *Chief Legal Officer*	2020	$250,000	—	—	—	—	$250,000

(1) Amount reflects the grant date fair value of stock options granted during fiscal year 2020 as calculated in accordance with ASC Topic 718, excluding the effect of estimated forfeitures. See Note 3 to the consolidated financial statements included elsewhere in this prospectus for information regarding the assumptions used in calculating this amount.

(2) All annual cash incentive bonuses paid to our Named Executive Officers are reflected in the"Non-Equity Incentive Plan Compensation" column of this table.

(3) Amount reflects health insurance premium payments.

Narrative to 2020 Summary Compensation Table

Base Salaries and Compensation

NeuroRx's Named Executive Officers receive an annual base salary or annual rate of compensation to compensate them for services rendered to NeuroRx. The base salary or annual rate of compensation payable to each Named Executive Officer is intended to provide a fixed component of compensation reflecting the executive's skill set, experience, role and responsibilities. For 2020, the annual base salary for Dr. Javitt was set at $275,000, Mr. Bestof's annual rate of compensation was set at $264,000 and Mr. Del Buono's annual base salary was set at $250,000. No changes were made to our Named Executive Officers' annual base salaries or annual rate of compensation for 2020.

Cash Bonus Compensation

Pursuant to his employment agreement, Dr. Javitt is eligible to receive a target bonus of $275,000 per year, which is tied to individual and company performance. Pursuant to his employment agreement, Mr. Del Buono is eligible to receive a target bonus of $50,000 per year.

Equity Compensation

Prior to the Business Combination, we typically granted stock options as the long-term incentive component of our compensation program. Stock options allow employees, including our Named Executive Officers, to purchase shares of our common stock at a price equal to the fair market value of our common stock on the date of grant. Our stock options have vesting schedules that are designed to encourage continued employment and typically vest as to one-third (1/3) of the shares subject to the option on the first anniversary of the applicable vesting commencement date andone-third (1/3) of the shares each of the next two anniversaries of the vesting commencement date, subject to the recipient's continued service through each applicable vesting date. From time to time, our board of directors may also construct alternate vesting schedules as it determines appropriate to motivate particular employees.

In 2016, Mr. Bestof was granted an option to purchase 70,000 shares of our common stock (as converted in connection with the Business Combination). In January 2018, Mr. Del Buono was granted an option to purchase 20,000 shares of our common stock. Refer to the "Outstanding Equity Awards at Fiscal Year End" table below for additional information regarding these options.

Executive Employment Arrangements

In connection with his commencement of employment with us in May 2015, we entered into an employment agreement with Dr. Javitt (the "Javitt Employment Agreement") pursuant to which he serves as our Chief Executive Officer and President. The Javitt Employment Agreement provides for an initial five-year term and extends automatically for additional one-year periods unless either party provides notice of termination. The Javitt Employment Agreement provides for a base salary of $275,000, subject to periodic increase by the board of directors. Pursuant to the Javitt Employment Agreement, Dr. Javitt is also eligible to receive a target bonus of $275,000 if targets established by the Board of Directors after consultation with Dr. Javitt are achieved.

In the event Dr. Javitt is terminated by us without cause and subject to his execution of a release of claims, in addition to the Final Compensation (as defined below), he will be entitled to receive (i) severance pay equal to the sum of (A) the base salary then in effect and (B) the target bonus paid in equal installments through the one (1) year anniversary of the termination date ("Javitt Severance Pay"), (ii) accrued compensation not yet paid and (iii) a prorated bonus through the date of termination. Health insurance will also continue during the severance period. In addition, we must offer to purchase all of our stock owned by Dr. Javitt. If we do not offer to purchase Dr. Javitt's stock in our company, such termination does not take effect. Dr. Javitt may elect, in his sole discretion, to sell some or all of his shares of our stock pursuant to such offer.

In the event Dr. Javitt resigns for good reason, he is entitled to the Javitt Severance Pay, subject to his execution of a release of claims. Upon any termination of employment, for any reason, Dr. Javitt's health insurance coverage shall continue for the duration of the applicable severance period.

"Cause" is defined in the Javitt Employment Agreement as Dr. Javitt's (i) failure to execute (other than by reason of disability) on our business plan, or serious negligence in the performance of, his material duties and responsibilities to our company, following appropriate notice by the board of directors and opportunity to cure, (ii) material breach of any restrictive covenants contained in the employment agreement or breach of any fiduciary duty owed to us, (iii) conviction of fraud or embezzlement or other dishonesty which is material (monetarily or otherwise) with respect to us or (iv) conviction or plea of nolo contendere to a felony or other crime involving moral turpitude that is material to us.

"Good reason" is defined in the Javitt Employment Agreement as (i) our failure to continue his position and title of CEO and President of our company or (ii) our failure to provide Dr. Javitt's cash compensation and benefits in accordance with the terms of the Javitt Employment Agreement, excluding any failure which is cured within ten (10) business days following notice from Dr. Javitt of such failure.

In connection with his commencement of employment with us in January 2018, we entered into an employment agreement with Mr. Del Buono (the "Del Buono Employment Agreement") pursuant to which he served as our Chief Legal Officer. The Del Buono Employment Agreement provides for an initial one-year term and extends automatically for additional one-year periods unless either party provides notice of termination. The Del Buono Employment Agreement provides for a base salary of $250,000, subject to periodic increase by the board of directors. Pursuant to the Del Buono Employment Agreement, Mr. Del Buono is also eligible to receive a target bonus of $50,000 based on achievement of specified performance criteria. The Del Buono Employment Agreement also provides Mr. Del Buono with an initial grant of 20,000 options, which vest over a three-year period, with initial vesting of 6,680 options on the first anniversary of employment and vesting 555 options per month for the subsequent 24 months, provided that vesting will accelerate upon the earlier of (i) the approval of a New Drug Application by the US Food and Drug Administration for NRX-101, or (ii) a change in control of NeuroRx.

In the event Mr. Del Buono is terminated by NeuroRx without cause subsequent to the third month of employment and subject to his execution of a release of claims, in addition to the Final Compensation (as defined below), he will be entitled to receive severance pay equal to the sum of the base salary then in effect through the six (6) month anniversary of the termination date ("Del Buono Severance Pay"). The duration of this severance period shall be extended by one month for each additional six months of successful employment, up to a cap of twelve (12) months of severance period. In addition, NeuroRx will also pay all accrued compensation not yet paid and a prorated bonus through the date of termination. In addition, NeuroRx must offer to purchase all NeuroRx stock owned by Mr. Del Buono. If NeuroRx does not offer to purchase Mr. Del Buono's NeuroRx stock, such termination does not take effect. Mr. Del Buono may elect, in his sole discretion, to sell some or all of his shares of NeuroRx stock pursuant to such offer. In the event Mr. Del Buono resigns for good reason, he is entitled to the Del Buono Severance Pay, subject to his execution of a release of claims.

"Cause" is defined the Del Buono Employment Agreement as (i) Mr. Del Buono's failure to perform (other than by reason of disability), or serious negligence in the performance of, his material duties and responsibilities to NeuroRx (unauthorized absence for a period of five business days shall be considered failure to perform); (ii) material breach of any restrictive covenants contained in the employment agreement or breach of any fiduciary duty owed to NeuroRx ; (iii) fraud or embezzlement or other dishonesty which is material (monetarily or otherwise) with respect to NeuroRx; (iv) indictment, conviction or plea of nolo contendere to a felony or other crime involving moral turpitude that is material to NeuroRx; or (v) loss of legal licensure, legal disciplinary proceedings, or other events that impair his ability to function as Chief Legal Officer of NeuroRx.

"Good Reason" is defined in the Del Buono Employment Agreement as (i) failure of NeuroRx to provide Mr. Del Buono cash compensation and benefits in accordance with the terms of the Del Buono Employment that is not otherwise cured within ten (10) business days following notice from Mr. Del Buono specifying in detail the

nature of such failure; (ii) any material diminution in Mr. Del Buono's duties, responsibilities or reporting relationship that is inconsistent in any respect with Mr. Del Buono's position(s), responsibilities and/or status with NeuroRx; (iii) a request by the NeuroRx board of directors or Chief Executive Officer for Mr. Del Buono to engage in actions that would constitute illegal or unethical acts; or (iv) any material breach of any written agreement entered into by and between Mr. Del Buono and NeuroRx, including the Del Buono Employment Agreement, which is not remedied by NeuroRx within ten (10) business days following notice from Mr. Del Buono specifying in detail the nature of such breach.

Pursuant to the terms of the Javitt Employment Agreement and the Del Buono Employment Agreement, in the event Dr. Javitt or Mr. Del Buono is terminated due to death or disability, the executives or their beneficiaries, as applicable, are entitled to (i) base salary earned but not paid through the date of termination, (ii) pay for any vacation time earned but not used through the date of termination, (iii) any annual bonus awarded for the year preceding that in which termination occurs but unpaid on the date of termination and (iv) any business expenses incurred but not reimbursed on the date of termination (all of the foregoing, the "Final Compensation"). In addition, upon a termination of employment due to disability, both Dr. Javitt and Mr. Del Buono are entitled to the Javitt Severance Pay and the Del Buono Severance Pay, respectively.

Both the Javitt Employment Agreement and the Del Buono Employment Agreement include (i) a confidentiality covenant that applies during the term of employment and for three (3) years following termination, (ii) assignment of intellectual property, (iii) a non-competition covenant that applies during the term of employment and for twelve (12) months following termination, and (iv) non-solicitation of employees and customers covenants that apply during the term of employment and for twelve (12) months following termination.

Under the terms of the Javitt Employment Agreement, Dr. Javitt is entitled to participate in all employee benefit plans, programs and arrangements made available to other U.S.-based employees generally. In addition, the Javitt Employment Agreement provides (i) long term disability coverage equal to his base salary plus 50% of his target bonus and (ii) executive life insurance equal to five years of base salary. NeuroRx expects that the compensation committee comprised of independent directors will extend similar benefits to all key executives post-Merger.

Under the terms of the Del Buono Employment Agreement, Mr. Del Buono shall either be provided with eighty percent (80%) of the premium for a "gold" plan available through the Virginia, e.g. "SHOP" health insurance exchange or shall be afforded equal financial consideration in the form of a flexible employee spending account at Mr. Del Buono's option. In addition, Mr. Del Buono will be entitled to participate in employee benefit plans from time to time in effect for U.S.-based employees of NeuroRx generally.

Mr. Besthof was engaged by NeuroRx as Chief Commercial and Patient Officer pursuant to the terms of a "Work For Hire" Agreement between NeuroRx and REBes Consulting LLC—Robert Besthof, dated as of March 1, 2016, which was amended as of October 23, 2020 (as amended, the "Besthof Agreement").

The Besthof Agreement provides for an initial one-year term and extends automatically for additional one-month periods unless NeuroRx provides written notice of non-renewal at least ten (10) days prior to the expiration of the term, or unless Mr. Besthof's services are terminated. The Besthof Agreement provides for an initial fee of $3,000 per week. The Besthof Agreement also provides Mr. Besthof with an initial grant of 70,000 options, which vest over a five-year period, provided that vesting will accelerate upon a change of control of NeuroRx. Mr. Besthof was granted an additional 70,000 options in October 2020 (the "Additional Options"), which also vest over a five-year period. The Additional Options are subject to accelerated vesting provisions, as described below.

If, following a change in control, either (A) Mr. Besthof's assigned and required place of work is more than fifty (50) miles from his home or (B) there is a substantial and material diminution in his duties or title, Mr. Besthof is entitled to receive (i) 50% accelerated vesting of his Additional Options, (ii) fee payment continuation at his current rate of $22,000 for a period of 12 months and (iii) 12 months of health care coverage under an equivalent to the employer plan at "gold level" or a supplemental payment equivalent to the health insurance premium payment under any such plan.

If, following a change in control, Mr. Besthof is terminated without cause (which is not defined in the Besthof Agreement), Mr. Besthof is entitled to receive (i) 100% accelerated vesting of his Additional Options, (ii) fee payment continuation at his current rate of $22,000 for a period of 12 months and (iii) 12 months of health care coverage under an equivalent to the employer plan at "gold level" or a supplemental payment equivalent to the health insurance premium payment under any such plan.

The Besthof Agreement includes an (i) assignment of intellectual property covenant, (ii) confidentiality covenant that applies for the greater of (x) a two-year period after the date of disclosure or (y) a two-year period from the end of the term of the Besthof Agreement,(iii) non-contract covenant pursuant to which Mr. Besthof shall not contract with any third party to manufacture or assist in the manufacture of an NMDA-based treatment for bipolar depression that applies for the term of the Besthof Agreement and for two years following the termination of the Besthof Agreement.

Outstanding Equity Awards at Fiscal Year End

The following table summarizes the number of shares of common stock underlying outstanding equity incentive plan awards for each Named Executive Officer as of December 31, 2020.

	Option Awards Stock Awards					Stock Awards	
Name and Principal Position	Vesting Commencement Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number Of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have not Vested (#)	Market Value of Shares or Units of Stock that Have not Vested ($)
Jonathan Javitt *Chief Executive Officer, Chairman and Director*		—	—	—	—	—	—
Robert Besthof	3/1/2016	56,000	14,000	$ 1.00	2/28/2026	—	—
Chief Commercial and Patient Officer and Head of Operations	10/23/2020	—	70,000	$ 15.25	10/22/2030	—	—
Brian Del Buono *Chief Legal Officer*	1/1/2018	19,444	556	$ 11.00	12/31/2027	—	—

Health, Welfare and Retirement Plans

NeuroRx does not currently maintain a 401(k) defined contribution plan or any other employee benefit plans or programs.

Director Compensation

Historically, we have not made annual cash or equity compensation awards to ournon-employee directors for service on our board of directors, although we have granted warrants to certain non-employee directors from time to time in recognition of their service on our board. During 2020, two board members were compensated for extensive, ongoing work on NeuroRx's behalf that was critical to several strategic transactions:

- A warrant to purchase 279,291 shares of Company common stock at a strike price of $15.25 per share was granted to Aaron Gorovitz, which is held in the name of his company AHG Neuro Options LLC. The warrant has an expiry date of July 14, 2025.
- Two warrants to purchase a total of 279,290 shares of Company common stock at a strike price of $15.25 per share were granted to Patrick Flynn, which are held in separate trusts for members of his family. Each warrant has an expiry date of October 22, 2025.

No cash or other equity-based awards were paid or provided to ournon-employee directors during 2020.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2018 to which we have been a party in which the amount involved exceeded or will exceed $120,000, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than transactions that are described under the section "*Executive and Director Compensation.*" We also describe below certain other transactions with our directors, executive officers and stockholders.

Lock-Up Agreement

At the Closing, certain stockholders of NeuroRx entered into a lock-up agreement ("Lock-Up Agreement") with our Company with respect to the Closing Consideration issuable to them in the Transactions, pursuant to which they agreed not to transfer the shares of Common Stock received as Closing Consideration for the Merger, except to certain permitted transferees, until the earlier of (a) the six-month anniversary of the Closing, (b) with respect to 50% of the shares of Common Stock issued to such persons, the date on which the closing price of the Common Stock equals or exceeds $12.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within any 30-trading day period commencing after the Closing, and (c) the date after the Closing on which BRPA consummates a liquidation, merger, stock or other similar transaction which results in all of BRPA's stockholders having the right to exchange their Common Stock for cash, securities or other property.

On June 22, 2021, the $12.00 stock price target under the Lock-Up Agreement was reached and, accordingly, fifty percent (50%) of such shares of Common Stock were released from the lock-up.

Stock Escrow Amendment

In connection with the execution of the Merger Agreement, we entered into a stock escrow amendment with the Sponsor, BRAC Lending Group LLC ("BRAC"), Graubard Miller, Big Rock Partners Sponsor, LLC and certain officers and directors of BRPA who held Founder Shares and Continental Stock Transfer & Trust Company (the "Stock Escrow Amendment"). The Stock Escrow Amendment provides: (a) for the forfeiture and cancellation of the Forfeited Shares (as defined in the Stock Escrow Amendment), (b) that the Sponsor Earnout Shares (as defined in the Stock Escrow Amendment) be subject to escrow pursuant to the Sponsor Agreement (as defined in the Stock Escrow Amendment) and in accordance with the terms of the Merger Agreement, (c) that the 40,000 shares of Common Stock held by Graubard Miller be released from escrow and (d) that all remaining shares of Common Stock held in escrow thereunder will be released from escrow on the earlier of (i) the six-month anniversary of the Closing, (ii) with respect to 50% of the shares of Common Stock issued to such persons, the date on which the closing price of the Common Stock equals or exceeds $12.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within any 30-trading day period commencing after the Closing, and (iii) the date after Closing on which BRPA consummates a liquidation, merger, stock exchange or other similar transaction which results in all of BRPA's stockholders having the right to exchange their Common Stock for cash, securities or other property.

On June 22, 2021, the $12.00 stock price target under the Stock Escrow Amendment was reached and, accordingly, the Company released fifty percent (50%) of the shares of Common Stock held in escrow (not including the Sponsor Earnout Shares).

Registration Rights Agreement

In connection with the execution of the Merger Agreement, we entered into a registration rights agreement (the "Registration Rights Agreement") with Jonathan Javitt and Daniel Javitt (the "Javitt Stockholders").

Subject to several exceptions, including the Company's right to defer a demand registration, shelf registration or underwritten offering under certain circumstances, the Javitt Stockholders may require that the Company register for public resale under the Securities Act all shares of the Common Stock that they request to be registered at any time, subject to the restrictions in the lock-up agreements described above, so long as the securities being registered in each registration statement or sold in any underwritten offering are reasonably expected to produce aggregate proceeds of at least $50.0 million.

If the Company becomes eligible to register the sale of its securities on FormS-3 under the Securities Act, the Javitt Stockholders have the right to require the Company to register the sale of the Common Stock held by them on Form S-3, subject to offering size and other restrictions. The Javitt Stockholders also have the right to request marketed and non-marketed underwritten offerings using a shelf registration statement.

If the Company proposes to file certain types of registration statements under the Securities Act with respect to an offering of equity securities (including for sale by the Company or at the request of the Javitt Stockholders), the Company will be required to use its reasonable best efforts to offer the parties to the Registration Rights Agreement the opportunity to register the sale of all or part of their shares on the terms and conditions set forth in the Registration Rights Agreement (customarily known as "piggyback rights").

All expenses of registration under the Registration Rights Agreement, including the legal fees of counsel chosen by stockholders participating in a registration, will be paid by the Company.

The registration rights granted in the Registration Rights Agreement are subject to customary restrictions including blackout periods and, if a registration is underwritten, any limitations on the number of shares to be included in the underwritten offering as reasonably advised by the managing underwriter or underwriters. The Registration Rights Agreement also contains customary indemnification and contribution provisions. The Registration Rights Agreement is governed by Delaware law.

Procedures with Respect to Review and Approval of Related Person Transactions

Our board of directors recognizes the fact that transactions with related persons present a heightened risk of conflicts of interests (or the perception of such conflicts of interest). We have adopted a written policy on transactions with related persons that is in conformity with the requirements for issuers having publicly held common stock that is listed on the Nasdaq. Under the policy, our legal department is primarily responsible for developing and implementing processes and procedures to obtain information regarding related persons with respect to potential related person transactions and then determining, based on the facts and circumstances, whether such potential related person transactions do, in fact, constitute related person transactions requiring compliance with the policy. If the legal department determines that a transaction or relationship is a related person transaction requiring compliance with the policy, our general counsel will be required to present to the audit committee all relevant facts and circumstances relating to the related person transaction. The audit committee will be required to review the relevant facts and circumstances of each related person transaction, including if the transaction is on terms comparable to those that could be obtained in arm's length dealings with an unrelated third party and the extent of the related person's interest in the transaction, take into account the conflicts of interest and corporate opportunity provisions of the our code of business conduct and ethics, and either approve or disapprove the related person transaction. If advance audit committee approval of a related person transaction requiring the audit committee's approval is not feasible, then the transaction may be preliminarily entered into by management upon prior approval of the transaction by the chair of the audit committee, subject to ratification of the transaction by the audit committee at the audit committee's next regularly scheduled meeting; provided, that if ratification is not forthcoming, management will make all reasonable efforts to cancel or annul the transaction. If a transaction was not initially recognized as a related person transaction, then, upon such recognition, the transaction will be presented to the audit committee for ratification at the audit committee's next regularly scheduled meeting; provided, that if ratification is not forthcoming, management will make all reasonable efforts to cancel or annul the transaction. Our management will update the audit committee as to any material changes to any approved or ratified related person transaction and will provide a status report at least annually of all then-current related person transactions. No director will be permitted to participate in approval of a related person transaction for which he or she is a related person.

Support Services

The company licenses patents owned by Glytech, LLC. During 2018, 2019 and 2020, NeuroRx paid Glytech, LLC $270,148, $464,720 and $272,929, respectively, for continuing research and development, technology support services and reimbursed expenses. These support services are ongoing. Glytech's support includes both non-clinical and clinical research in support of the expansion of our intellectual property portfolio.

In addition, we pay Zachary Javitt, the CEO's son on an hourly basis for services related to website, IT, and marketing support under the supervision of the Company's Chief Commercial Officer, who is responsible for assuring that the services are provided on financial terms that are at market. We paid this family member a total of $85,915, $48,000 and $44,723 during the years ended December 31, 2020, 2019 and 2018, respectively.

PT Master Services Agreement

NeuroRx entered into a Master Agreement for Information Technology Services ("PT Master Services Agreement") dated April 1, 2020, with Pill Tracker 2015, Ltd. ("Pill Tracker") for services relating to the development of the inhaled use form of ZYESAMI. Zachary Javitt and Dr. Jonathan Javitt are the chief executive officer and the board chairman, respectively, of Pill Tracker. This PT Master Services Agreement and any subsequent statements of work were negotiated and executed between Patrick Flynn and Robert Besthof of NeuroRx and Zachary Javitt.

Pursuant to the initial scope of work ("SOW") under the PT Master Services Agreement, Pill Tracker has been engaged to provide necessary pretrial development work in order to successfully support the clinical trial of ZYESAMI in a nebulized form. This work included consulting services and product sourcing for medical devices to support an inhaled form of ZYESAMI, the procurement, integration and deployment of an Internet of Things ("IoT") suite for the purposes of supporting the home-use of inhaled ZYESAMI in clinical trials, including software development and architecture, the development of training materials, instructional materials and technical/customer service infrastructure for a successful home-health deployment in the ZYESAMI study, the procurement of all necessary medical devices and IoT hardware for use in the ZYESAMI study, including nebulizers and pulse oximeters, the development of an ISO13485 compliant medical device quality system and development of a separate, "front-end" website to be used by nurses for managing the IoT system provisioned to patients.

The total project cost of the SOW was agreed at $309,651, exclusive of any applicable value added tax. NeuroRx has the right to terminate the PT Master Service Agreement, including the initial scope of work, at any time with 30 days' advance notice to Pill Tracker, subject to payment for work performed prior to the date of termination and any additional expenses incurred with our prior written approval.

In connection with the PT Master Services Agreement, NeuroRx paid Pill Tracker $317,232 during the year ended December 31, 2020 and, as of January 21, 2021, has paid Pill Tracker $39,053 during the year ended December 31, 2021. NeuroRx made no payments to Pill Tracker prior to 2020. The difference between the agreed price for the SOW and the amounts paid reflect agreed increases in development time, increase in hardware procurement requirements, and additional software features or change of software features in order to reflect the clinical trial protocol design.

PRINCIPAL STOCKHOLDERS

The following table sets forth information with respect to the beneficial ownership of our Common Stock, as of May 28, 2021 by:

- each person who is the beneficial owner of more than 5% of the outstanding shares of our Common Stock;
- each of our named executive officers and directors; and
- all of our executive officers and directors as a group.

Beneficial ownership for the purposes of the following table is determined in accordance with the rules and regulations of the SEC. A person is a "beneficial owner" of a security if that person has or shares "voting power", which includes the power to vote or to direct the voting of the security, or "investment power", which includes the power to dispose of or to direct the disposition of the security or has the right to acquire such powers within 60 days. Accordingly, we have included all shares of Common Stock issuable to such person upon the exercise of warrants or options currently exercisable or exercisable within 60 days of the date hereof. We did not deem such shares outstanding, however, for the purpose of computing the percentage ownership of any other person.

Unless otherwise noted in the footnotes to the following table, and subject to applicable community property laws, the persons and entities named in the table have sole voting and investment power with respect to their beneficially owned common stock and preferred stock.

Except as indicated in the footnotes to the table, each of the stockholders listed below has sole voting and investment power with respect to the shares of Common Stock owned by such stockholders. Unless otherwise noted, the address of each beneficial owner is c/o NRx Pharmaceuticals, Inc., 1201 N. Market Street, Suite 111, Wilmington, DE 19801, Attention: Corporate Secretary.

The beneficial ownership of our Common Stock is based on 47,914,531 shares of Common Stock issued and outstanding immediately following consummation of the Transactions, including the consummation of the PIPE Investment.

Beneficial Ownership Table

Name and Address of Beneficial Owners	Number of Shares	Percentage
Officers and Directors After the Transactions		
Jonathan C. Javitt(1)	14,817,329	31.22%
Daniel Javitt(2)	13,971,864	29.44%
Aaron Gorovitz(3)	41,686	*
Chaim Hurvitz(4)	1,863,216	3.91%
Patrick J. Flynn(5)	1,818,028	3.72%
Robert Bestof(6)	347,200	*
Daniel Troy(7)	108,530	*
Sherry A. Glied, Ph.D.(8)	78,605	*
Alessandra Daigneault(9)	79,867	*
Brian Del Buono(10)	115,000	*
William Fricker(11)	107,458	*
H.R. McMaster	0	*
All directors and executive officers as a group (11 persons)	21,169,577	44.47%
All *Greater than 5% Holders*		
GEM Yield Bahamas Limited(12)	4,374,266	8.69%
Glytech, LLC(2)	13,971,864	29.44%

* Indicates less than 1%

(1) Includes (i) 13,348,997 shares of common stock held by the Jonathan Javitt Living Trust, (ii) 1,422,000 shares of common stock held by The Javitt 2012 Irrevocable Dynasty Trust, and 46,332 shares held by Jonathan Javitt individually. Jonathan Javitt is the trustee of the Jonathan Javitt Living Trust and the Grantor of The Javitt 2012 Irrevocable Dynasty Trust.

(2) Consists of 13,971,864 shares of common stock held by Glytech, LLC. Glytech, LLC is owned by Daniel Javitt.

(3) Includes (i) 8,336 shares of common stock held by Samuel David Gorovitz 2017 Irrevocable Trust, (ii) 8,336 shares of common stock held by Jeremy Paul Gorovitz 2017 Irrevocable Trust, (iii) 8,336 shares of common stock held by Marisa Shey Gorovitz 2017 Irrevocable Trust and (iv) 16,678 shares of common stock held by Elizabeth Gorovitz. Aaron Gorovitz is the trustee of the Samuel David Gorovitz 2017 Irrevocable Trut, the Jeremy Paul Gorovitz 2017 Irrevocable Trust, and the Marisa Shey Gorovitz 2017 Irrevocable Trust. Elizabeth Gorovitz is the wife of Aaron Gorovitz.

(4) Includes (i) 1,436,350 shares of common stock held by Shirat HaChaim Ltd., (ii) 208,443 shares of common stock held by CH Health-Private Venture Capital Ltd. and (iii) 218,423 shares of common stock issuable upon exercise of fully vested warrants held by CH Health-Private Venture Capital Ltd. Chaim Hurwitz is the owner of Shirat HaChaim Ltd. and CH Health-Private Venture Capital Ltd.

(5) Consists of (i) 362,332 shares of common stock held by Nash-Flynn Investments, LLC, (ii) 70,418 shares of common stock held by the Whitney Pritchard Nash Flynn 2010 Trust and the Lindsay Pritchard Nash Flynn 2010 Trust, and (iii) 1,385,278 shares of common stock issuable upon exercise of fully vested warrants held by the Whitney Pritchard Nash Flynn 2010 Trust and the Lindsay Pritchard Nash Flynn 2010 Trust. Patrick Flynn is the owner of Nash-Flynn Investments, LLC and trustee of the Whitney Pritchard Nash Flynn 2010 Trust and the Lindsay Pritchard Nash Flynn 2010 Trust.

(6) Consists of 694,400 shares subject to options held by Robert Besthof, of which 347,200 are vested and exercisable within 60 days of May 28, 2021.

(7) Consists of (i) 43,093 shares of common stock held by Daniel Troy, and (ii) 65,437 shares subject to options held by Daniel Troy, all of which are vested and exercisable within 60 days of May 28, 2021.

(8) Consists of (i) 13,168 shares of common stock held by Cottingham-Hillcrest, Inc. and (ii) 65,437 shares subject to options held by Sherry A. Glied, Ph.D., of which all are vested and exercisable within 60 days of May 28, 2021.

(9) Consists of (i) 6,320 shares of common stock held by Alessandra Daigneault and (ii) 342,240 shares subject to options held by Alessandra Daigneault, of which 73,547 are vested and exercisable within 60 days of May 28, 2021.

(10) Consists of (i) 15,800 shares of common stock held by Brian Del Buono and (ii) 99,200 shares subject to options held by Brian Del Buono, of which all are vested and exercisable within 60 days of May 28, 2021.

(11) Consists of 198,400 shares subject to options held by William Fricker, of which 107,458 are vested and exercisable within 60 days of May 28, 2021.

(12) Consists of (i) 1,496,216 shares of common stock and (ii) 2,878,050 shares of common stock issuable upon exercise of fully vested warrants held by GEM Yield Bahamas Limited. The address of GEM Yield Bahamas Limited is Office of Lennox Paton Corporate Services Limited, Bayside Executive Park, Building 3, West Bay Street, P.O. Box N-4875, Nassau, Island of New Providence, Commonwealth of the Bahamas. Christopher F. Brown is the beneficial owner of all of the issued and outstanding shares of GEM Yield Bahamas Limited.

SELLING SECURITYHOLDERS

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

The following table sets forth information concerning the shares of Common Stock that may be offered from time to time by each Selling Securityholder. The number of shares beneficially owned by each Selling Securityholder is determined under rules issued by the SEC. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. Percentage ownership is based on 47,914,531 shares of Common Stock outstanding as of May 24, 2021. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of Common Stock subject to options, warrants or other rights held by such person that are currently exercisable or will become exercisable within 60 days of May 28, 2021 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. Unless noted otherwise, the address of all listed Selling Securityholders is c/o NRx Pharmaceuticals, Inc., 1201 Orange Street, Suite 600, Wilmington, Delaware 19801. Each of the Selling Securityholders listed has sole voting and investment power with respect to the shares beneficially owned by the Selling Securityholder unless noted otherwise, subject to community property laws where applicable.

The following table sets forth certain information provided by or on behalf of the Selling Securityholders concerning the Common Stock that may be offered from time to time by each Selling Securityholder pursuant to this prospectus. The Selling Securityholders identified below may have sold, transferred or otherwise disposed of all or a portion of their securities after the date on which they provided us with information regarding their securities. Any changed or new information given to us by the Selling Securityholders, including regarding the identity of, and the securities held by, each Selling Securityholder, will be set forth in a prospectus supplement or amendments to the registration statement of which this prospectus is a part, if and when necessary. A Selling Securityholder may sell all, some or none of such securities in this offering. See "Plan of Distribution."

	Shares Beneficially Owned Prior to the Offering		Number of Shares Being Offered	Shares Beneficially Owned After the Offering	
Name of Selling Stockholder	Number	Percentage		Number	Percentage
Hartree Partners, LP (1)	100,000	*	100,000	—	0
Kepos Alpha Master Fund L.P. (2)	250,000	*	250,000	—	0
Owl Creek Credit Opportunities Master Fund, LP(3)	300,000	*	300,000	—	0
Linden Advisors LP (4)	350,000	*	350,000	—	0
Jonathan Javitt	2,000,000	4.2%	2,000,000	—	0
Daniel Javitt	2,000,000	4.2%	2,000,000	—	0
EarlyBirdCapital, Inc. (6)	593,933	1.3%	393,933	200,000	*
GEM Yield Bahamas Limited (7)	1,833,628	3.9%	1,833,628	—	0
Graubard Miller (8)	40,000	*	40,000	—	0
Steve Levine (9)	158,640	*	158,640	—	0
David Nussbaum (10)	158,640	*	158,640	—	0
Stephen Vogel (11)	40,000	*	40,000	—	0
Robert Goldstein (12)	48,000	*	48,000	—	0
BRMR LLC (13)	40,000	*	40,000	—	0
Ed Kovary (14)	57,248	*	57,248	—	0
G2 Investment Partners (15)	48,000	*	48,000	—	0
R. Michael Powell (16)	95,643	*	95,643	—	0
Jeff Johnson (17)	8,000	*	8,000	—	0
A/Z Property Partners, LLC (18)	83,300	*	83,300	—	0
Eileen Moore (19)	8,159	*	8,159	—	0
Marc VanTricht (20)	9,748	*	9,748	—	0
Amy Kaufmann (21)	3,269	*	3,269	—	0
I-Bankers Securities, Inc. (22)	37,485	*	37,485	—	0
BRAC Lending Group LLC (23)	38,000	*	38,000	—	0
Richard Ackerman (24)	270,991	*	270,991	—	0
JF International LLC (25)	151,602	*	151,602	—	0
Troy T. Taylor (26)	9,475	*	9,475	—	0
Albert G. Rex (27)	42,638	*	42,638	—	0
Brownstone Realty Advisors, LLC (28)	47,375	*	47,375	—	0
MCT Trust (29)	47,375	*	47,375	—	0
Richard Thal (30)	18,950	*	18,950	—	0
Lori B. Wittman (31)	34,475	*	34,475	—	0
Stuart Koenig (32)	19,007	*	19,007	—	0
Roger Gladstone (33)	342	*	342	—	0
Big Rock Partners Sponsor LLC (34)	13,334	*	13,334	—	0

* Indicates less than 1%

(1) The principal business address of Hartree Partners, LP is 1185 Avenue of the Americas, New York, NY 10036, Attn: Andrew Bailey.

(2) The principal business address of Kepos Alpha Master Fund L.P. is 11 Times Square, 35th Floor, New York, NY 10036, Attn: General Counsel.

(3) The principal business address of Owl Creek Credit Opportunities Master Fund, LP is 640 Fifth Avenue, 20th Floor, New York, NY 10019, Attn: Steve Krause/Jason Danen/Dan Sapadin.

(4) The principal business address of Linden Advisors LP is c/o Linden Advisors, 590 Madison Avenue, 15th Floor, New York, NY 10022, Attn: General Counsel.

(5) Jonathan Javitt is NRx Pharmaceuticals' Chief Executive Officer. Jonathan Javitt, together with Daniel Javitt, controls a majority of the voting power of NRx Pharmaceuticals. Jonathan Javitt also controls the Jonathan Javitt Living Trust and The Javitt 2012 Irrevocable Dynasty Trust.

(6) Daniel Javitt is a co-founder of NRx Pharmaceuticals and owns 100% of Glytech, LLC. Daniel Javitt, together with Jonathan Javitt, controls a majority of the voting power of NRx Pharmaceuticals.

(6) The principal business address of EarlyBirdCapital, Inc. ("EBC") is One Huntington Quadrangle, Suite 4C18, Melville, NY 11747. Each of David M. Nussbaum and Steven Levine may be deemed to share control of the voting and investment power over the securities held by EBC. EBC is an affiliate of BRAC Lending Group LLC ("BRAC Lending").
(7) The principal business address of GEM Yield Bahamas Limited is Office of Lennox Paton Corporate Services Limited, Bayside Executive Park, Building 3, West Bay Street, P.O. Box N-4875, Nassau, Island of New Providence, Commonwealth of the Bahamas. Christopher F. Brown is the beneficial owner of all of the issued and outstanding shares of GEM Yield Bahamas Limited.
(8) The principal business address of Graubard Miller is 405 Lexington Ave, 11th Floor, New York, NY 10174.
(9) Mr. Levine's business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. Levine is the Chief Executive Officer of EBC and a managing member of BRAC Lending. He may be deemed to share control of the voting and investment power over the securities held by EBC and BRAC Lending.
(10) Mr. Nussbaum's business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. Nussbaum is the Chairman of the Board of EBC and a managing member of BRAC Lending. He may be deemed to share control of the voting and investment power over the securities held by EBC and BRAC Lending.
(11) Mr. Vogel was a member of BRAC Lending.
(12) Mr. Goldstein was a member of BRAC Lending.
(13) The principal business address of BRMR LLC is 68 Wheatley Road, Brookville, NY 11545. BRMR LLC was a member of BRAC Lending.
(14) Mr. Kovary's business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. Kovary is an employee of EBC.
(15) The principal business address of G2 Investment Partners is 366 Madison Avenue, 8th Floor, New York, NY, 10017. G2 Investment Partners was a member of BRAC Lending. Richard Goldstein is the general partner of G2 Investment Partners and may be deemed to have voting and investment control over the shares held thereby.
(16) Mr. Powell's business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. Powell is an employee of EBC.
(17) Mr. Johnson's business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. Johnson is an employee of EBC.
(18) The principal business address of A/Z Property Partners, LLC is 315 S. Beverly Drive, Suite 404, Beverly Hills, CA 90212. Richard Ackerman controls A/Z Property Partners, LLC.
(19) Ms. Moore's business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Ms. Moore was an employee of EBC.
(20) Mr. VanTricht's business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Mr. VanTricht is an employee of EBC.
(21) Ms. Kaufmann's business address is c/o EarlyBirdCapital, Inc., 366 Madison Avenue, 8th Floor, New York, NY 10017. Ms. Kaufmann is an employee of EBC.
(22) The principal business address of I-Bankers Securities Inc. is 535 Fifth Avenue, 4th Floor, New York, NY 10017.
(23) The principal business address of BRAC Lending is c/o EarlyBirdCapital, Inc. 366 Madison Avenue, 8th Floor, New York, NY 10017. Each of David M. Nussbaum and Steven Levine is a managing member of BRAC Lending and may be deemed to share voting and investment control over the securities held thereby. BRAC Lending is an affiliate of EBC.
(24) Includes an aggregate of 100,000 shares which may be forfeited if certain earnout conditions set forth in the Merger Agreement are not fulfilled. The principal business address of Richard Ackerman is c/o Big Rock Partners Sponsor LLC, 2645 N. Federal Highway, Suite 230, Delray Beach, FL 33483. Mr. Ackerman is a member of Big Rock Partners Sponsor LLC and is the former Chief Executive Officer and Chairman of the Company. Mr. Ackerman also controls A/Z Property Partners, LLC.
(25) The principal business address of JF International LLC is c/o Michael Fong, 12133 Plantation Way, Palm Beach Gardens, FL 33418. Mr. Fong is a former director of the Company. JF International LLC is a member of Big Rock Partners Sponsor LLC.
(26) The address of Troy T. Taylor is 2457 Collins Ave, PH2, Miami Beach, FL 33140. Mr. Taylor is a member of Big Rock Partners Sponsor LLC and a former director of the Company.
(27) The address of Albert G. Rex is 15 Fishermans Cove, Unit A, Key Largo, FL 33037. Mr. Rex is a member of Big Rock Partners Sponsor LLC and a former director of the Company.
(28) The principal business address of Brownstone Realty Advisors, LLC is 28562 Oso Parkway, Suite D522, Rancho Sta. Margarita, CA 92677. Michael Moers is the manager of Brownstone Realty Advisors, LLC. Brownstone Realty Advisors, LLC is a member of Big Rock Partners Sponsor LLC.
(29) The principal business address of MCT Trust is c/o The Courtland Group Inc., 1005 Terminal Way, Suite 100, Reno, NV 89502-2179. John Steven Hooper is the trustee of the MCT Trust. MCT Trust is a member of Big Rock Partners Sponsor LLC.
(30) The address of Richard Thal is 4278 NW 65th Rd, Boca Raton, FL 33496. Mr. Thal is a member of Big Rock Partners Sponsor LLC.
(31) Includes an aggregate of 25,000 shares which may be forfeited if certain earnout conditions set forth in the Merger Agreement are not met. The address of Lori Wittman is 76 Logan Loop, Highland Park, IL 60035. Ms. Wittman is a member of Big Rock Partners Sponsor LLC and a former financial consultant to the Company.
(32) The address of Stuart Koenig is 20155 NE 38th Court, Apt 1501, Aventura, FL 33180. Mr. Koenig is a member of Big Rock Partners Sponsor LLC and a former director of the Company.
(33) The address of Roger Gladstone is 2000 S. Ocean Blvd., Apt 10K, Boca Raton, FL 33432. Mr. Gladstone is a member of Big Rock Partners Sponsor LLC.
(34) The principal business address of Big Rock Partners Sponsor LLC is 2645 N. Federal Highway, Suite 230, Delray Beach, FL 33483. Richard Ackerman controls Big Rock Partners Sponsor LLC.

DESCRIPTION OF CAPITAL STOCK

General

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

Capital Stock

Our authorized capital stock consists of 500,000,000 shares of Common Stock, par value $0.001 per share, and 50,000,000 shares of preferred stock, par value $0.001 per share. As of June 9, 2021, there were 47,914,531 shares of Common Stock outstanding. No shares of preferred stock have been issued or are outstanding. Unless our board of directors determines otherwise, we will issue all shares of our capital stock in uncertificated form.

Common Stock

Holders of shares of Common Stock are entitled to one vote for each share held of record on all matters submitted to a vote of stockholders. The holders of Common Stock do not have cumulative voting rights in the election of directors.

In the event of our liquidation, dissolution or winding up and after payment in full of all amounts required to be paid to creditors and to any future holders of preferred stock having liquidation preferences, if any, the holders of Common Stock will be entitled to receive pro rata our remaining assets available for distribution. Holders of Common Stock do not have preemptive, subscription, redemption or conversion rights. There are no redemption or sinking fund provisions applicable to the Common Stock. The rights, powers, preferences and privileges of holders of the Common Stock are subject to those of the holders of any shares of preferred stock that the board of directors may authorize and issue in the future.

Preferred Stock

Under the terms of the Charter, our board of directors is authorized to direct us to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, powers, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

The purpose of authorizing our board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of the outstanding voting stock. Additionally, the issuance of preferred stock may adversely affect the holders of Common Stock by restricting dividends on the Common Stock, diluting the voting power of the Common Stock or subordinating the liquidation rights of the Common Stock. As a result of these or other factors, the issuance of preferred stock could have an adverse impact on the market price of the Common Stock.

Dividends

Declaration and payment of any dividend is subject to the discretion of our board of directors. The time and amount of dividends is dependent upon, among other things, our business prospects, results of operations, financial condition, cash requirements and availability, debt repayment obligations, capital expenditure needs, contractual restrictions, covenants in the agreements governing current and future indebtedness, industry trends, the provisions of Delaware law affecting the payment of dividends and distributions to stockholders and any other factors or considerations our board of directors may regard as relevant.

We currently intend to retain all available funds and any future earnings to fund the development and growth of our business, and therefore do not anticipate declaring or paying any cash dividends on Common Stock in the foreseeable future.

Anti-Takeover Provisions

The Charter and Bylaws contain provisions that may delay, defer or discourage another party from acquiring control of us. We expect that these provisions, which are summarized below, will discourage coercive takeover practices or inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors, which may result in an improvement of the terms of any such acquisition in favor of our stockholders. However, they also give our board of directors the power to discourage acquisitions that some stockholders may favor.

Authorized but Unissued Shares

The authorized but unissued shares of Common Stock and preferred stock are available for future issuance without stockholder approval, subject to any limitations imposed by the listing standards of Nasdaq. These additional shares may be used for a variety of corporate finance transactions, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved Common Stock and preferred stock could make more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Classified Board of Directors

Our Charter provides that our board of directors is divided into three classes of directors, with the classes to be as nearly equal in number as possible, and with each director serving a three-year term. As a result, approximately one-third of our board of directors will be elected each year. The classification of directors has the effect of making it more difficult for stockholders to change the composition of our board of directors.

Stockholder Action; Special Meetings of Stockholders

Our Charter provides that, unless Jonathan Javitt and Daniel Javitt own at least a majority of the shares of the Common Stock, stockholders may not take action by written consent, but may only take action at annual or special meetings of stockholders. As a result, a holder controlling a majority of capital stock would not be able to amend the Bylaws or remove directors without holding a meeting of stockholders called in accordance with the Bylaws. Further, our Charter provides that only the chairperson of our board of directors, a majority of our board of directors, our Chief Executive Officer or our President may call special meetings of stockholders, thus prohibiting a stockholder from calling a special meeting. These provisions might delay the ability of stockholders to force consideration of a proposal or for stockholders controlling a majority of capital stock to take any action, including the removal of directors.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

In addition, our Bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting or special meeting of stockholders. Generally, in order for any matter to be "properly brought" before a meeting, the matter must be (a) specified in a notice of meeting given by or at the direction of our board of directors, (b) if not specified in a notice of meeting, otherwise brought before the meeting by our board of directors or the chairperson of the meeting, or (c) otherwise properly brought before the meeting by a stockholder present in person who (1) was a stockholder both at the time of giving the notice and at the time of the meeting, (2) is entitled to vote at the meeting, and (3) has complied with the advance notice procedures specified in our Bylaws or properly made such proposal in accordance with Rule 14a-8 under the Exchange Act and the rules and regulations thereunder, which proposal has been included in the proxy statement for the annual meeting. Further, for business to be properly brought before an annual meeting by a stockholder, the stockholder must (a) provide Timely Notice in writing and in proper form to the secretary and (b) provide any updates or supplements to such notice at the times and in the forms required by our Bylaws. To be timely, a stockholder's notice must be delivered to, or mailed and

received at, our principal executive offices not less than 90 days nor more than 120 days prior to the one-year anniversary of the preceding year's annual meeting; *provided, however*, that if the date of the annual meeting is more than 30 days before or more than 60 days after such anniversary date, notice by the stockholder to be timely must be so delivered, or mailed and received, not later than the 90th day prior to such annual meeting or, if later, the 10th day following the day on which public disclosure of the date of such annual meeting was first made (such notice within such time periods, "Timely Notice").

Stockholders at an annual meeting or special meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our board of directors or by a qualified stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely written notice in proper form to our secretary of the stockholder's intention to bring such business before the meeting. These provisions could have the effect of delaying stockholder actions that are favored by the holders of a majority of the outstanding voting securities until the next stockholder meeting.

Amendment of Charter or Bylaws

Our Bylaws may be amended or repealed by a majority vote of our board of directors or by the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all of the then-outstanding shares entitled to vote generally in the election of directors, voting together as a single class. The affirmative vote of a majority of our board of directors and at least sixty-six and two-thirds percent (66 2/3%) in voting power of the outstanding shares entitled to vote would be required to amend certain provisions of our Charter.

Limitations on Liability and Indemnification of Officers and Directors

Our Charter and Bylaws provide indemnification and advancement of expenses for our directors and officers to the fullest extent permitted by the DGCL, subject to certain limited exceptions. We have entered into indemnification agreements with each of our directors and officers. In some cases, the provisions of those indemnification agreements may be broader than the specific indemnification provisions contained under Delaware law. In addition, as permitted by Delaware law, our Charter and Bylaws include provisions that eliminate the personal liability of directors for monetary damages resulting from breaches of certain fiduciary duties as a director. The effect of this provision is to restrict our rights and the rights of our stockholders in derivative suits to recover monetary damages against a director for breach of fiduciary duties as a director.

These provisions may be held not to be enforceable for violations of the federal securities laws of the United States.

Dissenters' Rights of Appraisal and Payment

Under the DGCL, with certain exceptions, our stockholders have appraisal rights in connection with a merger or consolidation of our company. Pursuant to Section 262 of the DGCL, stockholders who properly demand and perfect appraisal rights in connection with such merger or consolidation have the right to receive payment of the fair value of their shares as determined by the Delaware Court of Chancery.

Stockholders' Derivative Actions

Under the DGCL, any of our stockholders may bring an action in our name to procure a judgment in its favor, also known as a derivative action, provided that the stockholder bringing the action is a holder of the our shares at the time of the transaction to which the action relates.

Forum Selection

Our Charter and Bylaws provide that unless we consent in writing to the selection of an alternative forum, the (a) Chancery Court of the State of Delaware (or, in the event that the Chancery Court does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) shall, to the fullest extent permitted by law, be the sole and exclusive forum for: (i) any derivative action brought by a

stockholder on our behalf, (ii) any action, suit or proceeding asserting a claim of breach of fiduciary duty owed by any of our directors, officers, stockholders to us or to our stockholders, (iii) any action, suit or proceeding asserting a claim arising pursuant to the DGCL, the Charter or the Bylaws, or (iv) any action, suit or proceeding asserting a claim governed by the internal affairs doctrine; and (b) subject to the foregoing, the federal district courts of the United States of America shall be the exclusive forum for the resolution of any complaint asserting a cause of action arising under the Securities Act. Notwithstanding the foregoing, such forum selection provisions shall not apply to suits brought to enforce any liability or duty created by the Exchange Act or any other claim for which the federal courts of the United States have exclusive jurisdiction. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage such lawsuits against us and our directors, officers, and other employees. Alternatively, if a court were to find the choice of forum provision contained in the Charter to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could harm our business, results of operations, and financial condition.

Additionally, Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. As noted above, the Charter and the Bylaws will provide that the federal district courts of the United States of America shall have jurisdiction over any action arising under the Securities Act. Accordingly, there is uncertainty as to whether a court would enforce such provision. Our stockholders will not be deemed to have waived our compliance with the federal securities laws and the rules and regulations thereunder.

Transfer Agent and Registrar

The transfer agent and registrar for the Common Stock is Continental Stock Transfer & Trust Company, One State Street Plaza, New York, New York 10004.

Trading Symbol and Market

Our Common Stock is listed on Nasdaq under the symbol "NRXP" and our warrants are listed on Nasdaq under the symbol "NRXPW".

PLAN OF DISTRIBUTION

We are registering 8,757,258 shares of Common Stock for possible sale by the Selling Securityholders from time to time and up to 3,586,250 shares of Common Stock that are issuable upon the exercise of the warrants. We are required to pay all fees and expenses incident to the registration of the shares of our Common Stock to be offered and sold pursuant to this prospectus.

The shares of Common Stock beneficially owned by the Selling Securityholders covered by this prospectus may be offered and sold from time to time by the Selling Securityholders. The term "Selling Securityholders" includes donees, pledgees, transferees or other successors in interest selling securities received after the date of this prospectus from a Selling Securityholder as a gift, pledge, partnership distribution or other transfer. The Selling Securityholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Such sales may be made on one or more exchanges or in the over-the-counter market or otherwise, at prices and under terms then prevailing or at prices related to the then-current market price or in negotiated transactions. The Selling Securityholders may sell their shares by one or more of, or a combination of, the following methods:

- purchases by a broker-dealer as principal and resale by such broker-dealer for its own account pursuant to this prospectus;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- block trades in which the broker-dealer so engaged will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- an over-the-counter distribution in accordance with the rules of Nasdaq;
- through trading plans entered into by a Selling Securityholder pursuant to Rule10b5-1 under the Exchange Act, that are in place at the time of an offering pursuant to this prospectus and any applicable prospectus supplement hereto that provide for periodic sales of their securities on the basis of parameters described in such trading plans;
- to or through underwriters or broker-dealers;
- in "at the market" offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;
- in privately negotiated transactions;
- in options transactions;
- through a combination of any of the above methods of sale; or
- any other method permitted pursuant to applicable law.

In addition, any shares that qualify for sale pursuant to Rule 144 may be sold under Rule 144 rather than pursuant to this prospectus.

To the extent required, this prospectus may be amended or supplemented from time to time to describe a specific plan of distribution. In connection with distributions of the shares or otherwise, the Selling Securityholders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-dealers or other financial institutions may engage in short sales of shares of Common Stock in the course of hedging the positions they assume with Selling Securityholders. The Selling Securityholders may also sell shares of Common Stock short and redeliver the shares to close out such short positions. The Selling

Securityholders may also enter into option or other transactions with broker-dealers or other financial institutions that require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction). The Selling Securityholders may also pledge shares to a broker-dealer or other financial institution, and, upon a default, such broker-dealer or other financial institution, may effect sales of the pledged shares pursuant to this prospectus (as supplemented or amended to reflect such transaction).

A Selling Securityholder may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by any Selling Securityholder or borrowed from any Selling Securityholder or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from any Selling Securityholder in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement (or a post-effective amendment). In addition, any Selling Securityholder may otherwise loan or pledge securities to a financial institution or other third party that in turn may sell the securities short using this prospectus. Such financial institution or other third party may transfer its economic short position to investors in our securities or in connection with a concurrent offering of other securities.

In effecting sales, broker-dealers or agents engaged by the Selling Securityholders may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the Selling Securityholders in amounts to be negotiated immediately prior to the sale.

In offering the shares covered by this prospectus, the Selling Securityholders and any broker-dealers who execute sales for the Selling Securityholders may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. Any profits realized by the Selling Securityholders and the compensation of any broker-dealer may be deemed to be underwriting discounts and commissions.

In order to comply with the securities laws of certain states, if applicable, the shares must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

We have advised the Selling Securityholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the Selling Securityholders and their affiliates. In addition, we will make copies of this prospectus available to the Selling Securityholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The Selling Securityholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

At the time a particular offer of shares is made, if required, a prospectus supplement will be distributed that will set forth the number of shares being offered and the terms of the offering, including the name of any underwriter, dealer or agent, the purchase price paid by any underwriter, any discount, commission and other item constituting compensation, any discount, commission or concession allowed or reallowed or paid to any dealer, and the proposed selling price to the public.

A holder of warrants may exercise its warrants in accordance with the Warrant Agreement on or before the expiration date by surrendering, at the office of the warrant agent, Continental Stock Transfer & Trust Company, the certificate evidencing such warrant, an election to purchase, properly completed and duly executed, accompanied by full payment of the exercise price and any and all applicable taxes due in connection with the exercise of the warrant, subject to any applicable provisions relating to cashless exercises in accordance with the Warrant Agreement.

LEGAL MATTERS

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

EXPERTS

The consolidated financial statements of NeuroRx, Inc. as of December 31, 2020 and 2019, and for each of the years then ended have been included in this prospectus in reliance upon the report of KPMG LLP, independent registered public accounting firm, appearing elsewhere herein, and upon the authority of said firm as experts in accounting and auditing.

The financial statements of BRPA as of December 31, 2020 and 2019 and for each of the two years in the period ended December 31, 2020 appearing in this prospectus have been audited by Marcum LLP, independent registered public accounting firm, as set forth in their report thereon appearing elsewhere in this prospectus, and are included in reliance on such report given on the authority of such firm as an expert in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

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

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NEURORX, INC. – UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

BIG ROCK PARTNERS ACQUISITIONS CORP. – AUDITED FINANCIAL STATEMENTS

BIG ROCK PARTNERS ACQUISITIONS CORP. – UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
NeuroRx, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of NeuroRx, Inc. and subsidiary (the Company) as of December 31, 2020 and 2019, the related consolidated statements of operations, changes in stockholders' equity (deficit), and cash flows for each of the years then ended, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the years then ended, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2017.

Short Hills, New Jersey

May 11, 2021

NeuroRx, Inc.

CONSOLIDATED BALANCE SHEETS

	December 31, 2020	December 31, 2019
ASSETS		
Current assets:		
Cash	$ 1,858,513	$ 877,421
Accounts receivable, net of allowances of $257,463	831,390	—
Prepaid expenses and other current assets	240,352	97,585
Total current assets	2,930,255	975,006
Other assets	10,914	10,930
Total assets	$ 2,941,169	$ 985,936
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable (includes $149,067 and $92,744 due to related parties, respectively)	$ 3,153,310	$ 2,073,402
Accrued settlement expense	39,486,139	—
Accrued clinical site costs	1,547,432	—
Accrued and other current liabilities	1,728,483	9,649
Dividends payable	7,589	7,589
Convertible notes payable and accrued interest	—	130,251
Notes payable and accrued interest	248,861	154,190
Total current liabilities	46,171,814	2,375,081
Notes payable and accrued interest	547,827	—
Convertible notes payable and accrued interest	—	3,461,805
Total liabilities	$ 46,719,641	$ 5,836,886
Stockholders' equity (deficit):		
Convertible series A preferred stock, $0.001 par value, 1,000,000 shares authorized, issued and outstanding at December 31, 2020 and 2019, liquidation preference of $1,000,000 at December 31, 2020 and 2019	$ 1,000	$ 1,000
Convertible series B-1 preferred stock, $0.001 par value, 1,050,695 shares authorized, issued and outstanding at December 31, 2020 and 2019, liquidation preference of $7,964,268 at December 31, 2020 and 2019	1,050	1,050
Convertible series B-1A preferred stock, $0.001 par value, 316,848 shares authorized, issued and outstanding at December 31, 2020 and 2019, liquidation preference of $2,159,608 at December 31, 2020 and 2019	317	317
Convertible series B-2 preferred stock, $0.001 par value, 100,000 shares authorized; 4,167 and-0- shares issued and outstanding at December 31, 2020 and 2019, liquidation preference of $50,004 and $0 at December 31, 2020 and 2019	4	—
Common stock, $0.001 par value, 20,000,000 and 14,060,001 shares authorized; 11,227,676 and 10,686,191 shares issued and outstanding at December 31, 2020 and 2019, respectively	11,228	10,686
Additional paid-in capital	46,387,649	33,538,813
Accumulated deficit	(90,179,720)	(38,402,816)
Total stockholders' equity (deficit)	(43,778,472)	(4,850,950)
Total liabilities and stockholders' equity (deficit)	$ 2,941,169	$ 985,936

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

NeuroRx, Inc.

CONSOLIDATED STATEMENT OF OPERATIONS

	For the Years Ended December 31,	
	2020	**2019**
Operating expenses:		
Research and development	$ 10,625,032	$ 3,495,648
General and administrative	11,435,658	2,767,590
Settlement expense	39,486,139	—
Reimbursement of expenses from Relief Therapeutics	(10,160,421)	—
Total operating expenses	51,386,408	6,263,238
Loss from operations	(51,386,408)	(6,263,238)
Other expenses:		
Loss on conversion of convertible notes payable	306,641	—
Interest expense	56,695	303,057
Change in fair value of embedded put	27,160	162,866
Total other expenses	(390,496)	(465,923)
Loss before tax	(51,776,904)	(6,729,161)
Tax expense	—	—
Net loss	$ (51,776,904)	$ (6,729,161)
Net loss per share		
Basic and Diluted	$ (4.77)	$ (0.63)
Weighted average common shares outstanding		
Basic and Diluted	10,845,240	10,690,209

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

NeuroRx, Inc.

CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)

	Years ended December 31, 2020 and 2019												
	Series A Convertible Preferred Stock		Series B-1A Convertible Preferred Stock		Series B-1 Convertible Preferred Stock		Series B-2 Convertible Preferred Stock		Common Stock		Additional Paid-in-Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balance - December 31, 2018	1,000,000	$1,000	316,848	$ 317	1,050,695	$ 1,050	—	$ —	10,449,837	$10,450	$21,302,460	$(31,672,972)	$(10,357,695)
Common stock issued, net of transaction costs									536,354	536	5,801,466		5,802,002
Settlement consideration paid by shareholders in common stock											5,999,994		5,999,994
Stock-based compensation											433,910		433,910
Change in accounting method upon adopting ASU 2018-07											683	(683)	—
Retired founder shares									(300,000)	(300)	300		—
Net loss												(6,729,161)	(6,729,161)
Balance - December 31, 2019	**1,000,000**	**$1,000**	**316,848**	**$ 317**	**1,050,695**	**$ 1,050**	**—**	**$ —**	**10,686,191**	**$10,686**	**$33,538,813**	**$(38,402,816)**	**$ (4,850,950)**
Common stock issued									171,796	172	2,578,942		2,579,114
Common stock issued to settle note conversion									360,189	360	3,961,719		3,962,079
Common stock issued to settle accounts payable									9,500	10	144,865		144,875
Series B-2 convertible preferred stock issued							4,167	4			50,000		50,004
Warrants issued as compensation for services											5,382,905		5,382,905
Stock-based compensation											730,405		730,405
Net loss												(51,776,904)	(51,776,904)
Balance - December 31, 2020	**1,000,000**	**$1,000**	**316,848**	**$ 317**	**1,050,695**	**$ 1,050**	**4,167**	**$ 4**	**11,227,676**	**$11,228**	**$46,387,649**	**$(90,197,720)**	**$(43,778,472)**

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

NeuroRx, Inc.

CONSOLIDATED STATEMENT OF CASH FLOWS

	For the Years Ended December 31,	
	2020	2019
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net Loss	$ (51,776,904)	$ (6,729,161)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	1,517	859
Stock-based compensation	730,405	433,910
Warrant expense	5,382,905	—
Change in fair value of embedded put	27,160	162,866
Amortization of debt discount	16,475	130,433
Non-cash interest expense	65,103	167,979
Non-cash consulting expense	—	499,994
Non-cash settlement expense	39,486,139	—
Loss on conversion of notes payable	306,641	—
Loss on common stock issued to settle accounts payable	41,617	—
Changes in operating assets and liabilities:		
Accounts receivable	(831,390)	—
Prepaid expenses and other assets	(142,788)	(44,937)
Accounts payable	1,183,143	(52,181)
Accrued expenses and other liabilities	3,243,610	(112,087)
Net cash used in operating activities	(2,266,367)	(5,542,325)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of computer equipment	(1,501)	(3,552)
Net cash used in investing activities	(1,501)	(3,552)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from notes payable	619,842	—
Proceeds from issuance of series B-2 Preferred stock	50,004	—
Proceeds from issuance of Common stock, net of transaction costs	2,579,114	5,802,002
Net cash provided by financing activities	3,248,960	5,802,002
Net increase in cash	981,092	256,125
Cash at beginning of year	877,421	621,296
Cash at end of year	$ 1,858,513	$ 877,421
Supplemental disclosure of cash flow information:		
Non-cash investing and financing activities		
Common stock issued to settle accounts payable	$ 144,875	$ —
Conversion of notes payable into common stock	$ 3,655,438	$ —
Issuance of common stock warrants as offering costs	$ 30,536	$ 63,337
Settlement consideration paid by shareholders in common stock	$ —	$ 5,500,000
Short-term note payable issued to settle accounts payable	$ —	$ 154,190

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

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization

The Business

NeuroRx, Inc. (the "Company" or "NeuroRx") was formed on May 20, 2015 and is incorporated in the State of Delaware. The Company established a wholly owned subsidiary, NeuroRx 2015 LTD (Israel), in December 2015, for the purpose of managing the continued development of a subset of the Company's technology.

The Company is a clinical stage pharmaceutical research and development company primarily engaged in the development of a drug regimen to treat patients with depression and suicidal ideation or behavior.

2. Liquidity

As of December 31, 2020, the Company had $1,858,513 in cash. Since inception the Company has experienced net losses and negative cash flows from operations each fiscal year. The Company has no revenues and expects to continue to incur operating losses for the foreseeable future, and may never become profitable. The Company is dependent on its ability to continue to raise equity and/or debt financing to continue operations, and the attainment of profitable operations. The Company has a collaboration agreement with Relief Therapeutics Holdings ("Relief"), which provided for funding by Relief of certain research and development expenses related to the U.S. development of ZYESAMI and the portion of corporate overhead attributable to that program. The proceeds received amounted to $10,160,421 for the year ended December 31, 2020. Subsequent to December 31, 2020, Relief has not reimbursed the Company for any additional expenses related to the IV clinical trials for the ZYESAMI. The IV clinical trials for the ZYESAMI were completed on February 24, 2021. During the first quarter of 2021, the Company sold 43,018 shares of common stock for gross proceeds of $2,495,058, and 79,400 shares of common stock for gross proceeds of $5,716,800. On March 28, 2021, the Company received $7,500,018 from the exercise of a warrant for the purchase of 473,486 shares. Accordingly, the Company believes that it currently has sufficient funds to support operations through the next twelve months from the date the financial statements are issued. The Company intends to use the proceeds of the merger transaction to fund the ZYESAMI inhaled trial for COVID-19. The Company cannot make any assurances that additional financings will be available to it and, if available, on acceptable terms or at all. This could negatively impact the Company's business and operations and could also lead to the reduction of the Company's operations.

COVID-19 Outbreak

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency because of a new strain of coronavirus originating in Wuhan, China (the "COVID-19 Outbreak") and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID-19 Outbreak as a pandemic, based on the rapid increase in exposure globally.

The full impact of the COVID-19 Outbreak continues to evolve as of the date of this report. As such, the Company cannot estimate the full magnitude that the pandemic will have on the Company's business. If the COVID-19 Outbreak continues, it may have a material adverse effect on the Company's financial condition, liquidity, and future results of operations for the year ending December 31, 2021 and beyond. Management is actively monitoring the impact of the global pandemic on its financial condition, liquidity, operations, industry, and workforce. Given the daily evolution of the COVID-19 Outbreak and the global responses to curb its spread, the Company is not able to estimate the effects of the COVID-19 Outbreak on its results of operations, financial condition, or liquidity for the year ending December 31, 2021 and beyond.

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

3. Summary of Significant Accounting Policies

Basis of Presentation

The Company's financial statements have been prepared in conformity with generally accepted accounting principles in the United States of America ("GAAP") as determined by Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC").

Use of Estimates

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

Certain Risks and Uncertainties

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

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of 90 days or less at acquisition to be cash equivalents. As of December 31, 2020 and 2019, the Company does not have any cash equivalents.

Fair Value of Financial Instruments

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

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

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

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

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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.

Fair value measurements discussed herein are based upon certain market assumptions and pertinent information available to management as of and during the years ended December 31, 2020 and 2019. The carrying amount of accounts payable approximated fair value as they are short term in nature. The fair value of warrants issued for services is estimated based on the Black-Scholes model during the years ended December 31, 2020 and 2019. The carrying value of notes payable and convertible notes payable approximated the estimated fair values due to their recent issuances. The estimated fair value of the warrants and embedded put, represent Level 3 measurements.

Foreign Currency

The Company's functional currency is the U.S. dollar. The functional currency of our foreign operation is the respective local currency. Assets and liabilities of foreign operation denominated in local currencies are translated at the spot rate in effect at the applicable reporting date. The consolidated statements of operations are translated at the weighted average rate of exchange during the applicable period. The resulting unrealized cumulative translation adjustment is not material to the financial statements.

Accounts Receivable

Accounts receivable consist of balances due from collaborative partners. In determining collectability, historical trends are evaluated, and specific partner issues are reviewed on a periodic basis to arrive at appropriate allowances. As of December 31, 2020, the Company has recorded an allowance for doubtful accounts of $257,463.

Concentration of Credit Risk and Off-Balance Sheet Risk

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

Research and Development Costs

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

Derivative Financial Instruments

The Company does not use derivative instruments to hedge exposures to interest rate, market, or foreign currency risks. The Company evaluates all of its financial instruments, to determine if such instruments contain features that qualify as embedded derivatives.

Embedded derivatives must be separately measured from the host contract if all the requirements for bifurcation are met. The assessment of the conditions surrounding the bifurcation of embedded derivatives depends on the nature of the host contract. Bifurcated embedded derivatives are recognized at fair value, with changes in fair value recognized in the statement of operations each period. Bifurcated embedded derivatives are classified with the related host contract in the Company's balance sheet.

Stock-Based Compensation

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

Income Taxes

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

Loss Per Share

Basic loss per share of common stock is computed by dividing net loss attributable to common stockholders by the weighted average number of shares of common stock outstanding for the period. Diluted loss per share excludes, when applicable, the potential impact of stock options, common stock warrant shares, and convertible preferred stock because their effect would be anti-dilutive due to our net loss. Since the Company had a net loss in each of the periods presented, basic and diluted net loss per common share are the same.

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The calculation of basic and diluted net loss per share attributable to common stock was as follows:

	As of December 31,	
	2020	2019
Numerator:		
Net loss attributable to common stock—basic and diluted	$ (51,776,904)	$ (6,729,161)
Denominator:		
Weighted average shares—basic and diluted	10,845,240	10,690,209
Net loss per share attributable to common stock—basic and diluted	$ (4.77)	$ (0.63)

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 presented because their effect would have been anti-dilutive.

	Year Ended December 31,	
	2020	2019
Convertible preferred stock as if converted	2,371,710	2,367,543
Stock options	486,755	333,588
Common stock warrants	620,054	57,473

Recent Accounting Pronouncements

In June 2018, the FASB issued ASU2018-07, which simplifies the accounting for nonemployee share-based payment transactions. The amendments specify that Topic 718 applies to all share-based payment transactions in which a grantor acquires goods or services to be used or consumed in a grantor's own operations by issuing share-based payment awards. The Company adopted ASU 2018-07 as of January 1, 2019, which resulted in a cumulative effect charge of $683 to accumulated deficit.

4. Accrued and Other Current Liabilities

Accrued and other current liabilities consisted of the following at the dates indicated:

	December 31,	
	2020	2019
Accrued and other current liabilities:		
Professional services	$ 606,553	$ —
Accrued research and development expenses	586,426	—
Accrued employee expenses	530,500	—
Other accrued liabilities	5,004	9,649
Total accrued and other current liabilities	$ 1,728,483	$ 9,649

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

5. Convertible Notes Payable

	December 31,	
	2020	2019
Convertible Notes:		
2017 convertible notes payable due November 2021	$ —	$2,500,000
2018 convertible note payable due January 2022	—	100,000
2018 convertible notes payable due April 2022	—	200,000
Fair value of embedded put	—	738,602
Debt discount	—	(296,437)
Carrying value of convertible notes	$ —	$3,242,165
Accrued interest	—	349,891
Total convertible notes payable and accrued interest	$ —	$3,592,056

	December 31,	
	2020	2019
Convertible Notes:		
Convertible notes payable and accrued interest, current	$ —	$ 130,251
Convertible notes payable and accrued interest,non-current	—	3,461,805
Total convertible notes payable and accrued interest	$ —	$3,592,056

On February 12, 2020, a Qualified Financing Event (as defined below) occurred when the Company received cumulative investment proceeds in excess of $10,000,000 from the sale and issuance of common shares. The fair value of the Company's common shares were $11.00 per share. The 2017 Notes (as defined below) and the 2018 Notes (as defined below) in the aggregate principal amount of $2,800,000 were converted into 318,183 common shares (at the discounted price of $8.80 per share), and the related unpaid and accrued interest totaling $369,660 were also converted into 42,006 common shares of the Company (at the discounted price of $8.80 per share). Additionally, the Company recognized a loss on extinguishment for the difference between the carrying value of the convertible notes, unamortized debt discount, and the value of the embedded put option and the fair value of the common shares issued of $306,641 during the year ended December 31, 2020.

2017 Convertible Notes Payable

On November 16, 2017 and November 19, 2017, the Company issued convertible notes ("2017 Notes"), as amended for aggregate gross proceeds of $2,500,000. The 2017 Notes accrued interest at a rate of 6% per annum and principal and interest were due and payable four years from the date of issuance. Upon either a sale of the Company's assets or all of its capital stock, or a change of control, the principal balance would double and be repaid. Upon closing of either a sale of the Company's shares for at least $10,000,000 or a public offering of the Company's securities ("Qualified Financing Event"), the outstanding principal balance will be converted into the number of such securities sold at a conversion price equal to 80% of the securities negotiated share price.

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

2018 Convertible Notes Payable

On January 5, 2018 and April 25, 2018, the Company issued convertible notes ("2018 Notes"), as amended for aggregate gross proceeds of $300,000. The 2018 Notes accrued interest at a rate of 6% per annum and were due and payable four years from the date of issuance. Upon either a sale of the Company's assets or all of its capital stock, or a change of control, the principal balance would double and be repaid. Upon closing of either a sale of the Company's shares for at least $10,000,000 or a public offering of the Company's securities ("Qualified Financing Event"), the outstanding principal balance will be converted into the number of such securities sold at a conversion price equal to 80% of the securities negotiated share price. The January 5, 2018 note for $100,000 was not amended and interest was unpaid, as such, that note and related accrued interest were classified as current liabilities. The April 25, 2018 note for $200,000 was amended similar to the 2017 Notes to accrue interest and to be paid at maturity with the principal.

Upon closing of a public offering of the Company's common stock, each of the 2017 Notes and 2018 Notes settle by providing the holder with a variable number of shares sold in the offering with an aggregate fair value determined by reference to the debt principal. In this scenario, the value that the holder receives at settlement does not vary with the value of the Company's common stock, so the settlement provision was not a typical conversion option. Rather, the share settlement feature was considered a contingent redemption provision (i.e., a contingent embedded put).

The Company evaluated the embedded put features in accordance with ASC815-15-25. The embedded puts are not clearly and closely related to the debt host instrument and therefore have been separately measured at fair value, with subsequent changes in fair value recognized in the Statement of Operations.

The proceeds received upon issuing the 2017 Notes and 2018 Notes were first allocated to the fair value of the embedded put with the remainder to the debt host instrument. The Company recorded a $493,982 and $57,204 debt discount upon issuance of the 2017 and 2018 convertible notes, respectively. The Company recognized a loss of $27,160 and $162,866 during the years ended December 31, 2020 and 2019, respectively, due to the estimated increase in fair value of the embedded put. Management used a scenario-based analysis to estimate the fair value of the embedded put features at issuance of the 2017 Notes and 2018 Notes and as of December 31, 2019.

The discount is amortized to interest expense over the term of the debt. The Company amortized debt discount of $16,475 and $130,433 to interest expense during the years ended December 31, 2020 and 2019, respectively. The Company paid no interest during the years ended December 31, 2020 and 2019.

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

6. Notes Payable

	December 31,	
	2020	2019
Note Payable — Related Party	$ 154,190	$ 154,190
Relief Therapeutics Loan	500,000	—
Paycheck Protection Program Loan	119,842	—
Carrying value of notes payable	774,032	154,190
Accrued interest	22,656	—
Total notes payable and accrued interest	$ 796,688	$ 154,190

	December 31,	
	2020	2019
Notes payable:		
Notes payable and accrued interest, current	$ 248,861	$ 154,190
Notes payable and accrued interest,non-current	547,827	—
Total notes payable and accrued interest	$ 796,688	$ 154,190

Note Payable — Related Party

On July 1, 2019, the Company converted certain accounts payable into a loan (the "Note Payable — Related Party") with a related party in the amount of $154,190. The loan, in the form of a promissory note, matures on July 1, 2020. The principal amount of the loan and any accrued but unpaid interest shall be due and payable beginning July 1, 2019. All payments shall be applied first to accrued but unpaid interest, and then to outstanding principal. If not sooner paid, the entire remaining indebtedness (including accrued interest) shall be due and payable on July 1, 2020. The loan bears interest, compounded daily, at 6% annual interest. The loan continues to accrue interest as it was not paid off upon maturity.

Relief Therapeutics Loan

On April 6, 2020, the Company entered into a loan agreement with Relief Therapeutics (the "Relief Therapeutics Loan") in the amount of $500,000. The loan matures on April 6, 2022 and bears interest at 2% per annum payable in arrears.

Paycheck Protection Program Loan

On April 28, 2020, the Company received $119,842 in loan funding from the Paycheck Protection Program (the "PPP Loan"), established pursuant to the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") and administered by the U.S. Small Business Administration ("SBA"). The unsecured PPP Loan accrues interest on the outstanding principal at the rate of 1% per annum, and there is a six month deferment period until equal installment payments of $6,744 of principal and interest are due. The term of the PPP Loan is two years. To the extent the loan amount is not forgiven under the PPP, the Company is obligated to make equal monthly payments of principal and interest, beginning seven months from the date of the Note, until the maturity date. The Loan amount may be eligible for forgiveness pursuant to (1) at least 75% of the loan proceeds are used to cover payroll costs and the remainder is used for mortgage interest, rent and utility costs over the eight week period after the loan is made, and (2) the number of employees and compensation levels are generally

maintained. Forgiveness of the loan is dependent on the Company having initially qualified for the loan and qualifying for the forgiveness of such loan based on future adherence to the forgiveness criteria. The Company used the entire PPP Loan for qualifying payroll expenses, and filed for loan forgiveness on December 30, 2020, though no assurance is provided that the Company will obtain forgiveness of the PPP Loan in whole or in part.

7. Commitments and Contingencies

Operating Lease

The Company leases office space on a month-to-month basis. The rent expense for the years ended December 31, 2020 and 2019 was $54,649 and $42,040, respectively.

Litigation - Settlement Liability

In September of 2018, Sarah Herzog Memorial Hospital Ezrat Nashim filed suit against NeuroRx, Inc., the founding shareholders alleging a dispute as to the ownership and use of intellectual property related to anti-depressants and anti-psychotics. Prior to service of the lawsuit, in December of 2018 all parties to the referenced action submitted to voluntary non-binding mediation, and reached an agreement in principle to settle the matter. The agreement provided for licensing of certain technology ("Herzog License"), future low single digit royalties upon commercialization, certain milestone payments and the transfer of 500,000 shares of NeuroRx, Inc. common stock to Sarah Herzog Memorial Hospital Ezrat Nashim (250,000 of which were transferred from the Jonathan Javitt Living Trust and 250,000 of which were transferred from Glytech, LLC a company wholly owned by Daniel Javitt). The milestone payments for developmental and commercial milestones each range from $100,000 to $750,000. Annual maintenance fees range up to $150,000. At December 31, 2018, the Company accrued $5,616,732 (representing the fair value of such shares of $5,500,000 and legal costs of $116,732) as settlement liability expense. The final settlement was signed in April 2019, pursuant to which, 500,000 shares were transferred to Herzog with an approximate fair value of $5,500,000. This charge was recorded pursuant to ASC 260, which deems consideration paid by control parties to have been paid by the Company. In connection with this settlement, 300,000 founder shares were returned to the Company and retired in 2019.

In October of 2019, the founding shareholders of the Company transferred 45,454 shares of common stock with a fair value of $499,994 to a former adviser to release and discharge the Company from any obligation to the former adviser or transfer any additional securities. This charge was recorded as of September 30, 2019, by the Company as consulting expense even though the consideration was paid from the stock accounts of the founders without dilution to the Company pursuant to ASC 260, which deems consideration paid by control parties to have been paid by the Company.

As of December 31, 2020, there was no further litigation against the Company.

Milestone Payments

Pursuant to the legal settlement, which included the license of intellectual property rights from SHMH, an ongoing royalty of 1% – 2.5% ofNRX-101 gross sales shall be due SHMH, together with milestone payments of $250,000, upon completion of phase 3 trials and commercial sale of NRX-101. The milestone payments for developmental and commercial milestones each range from $100,000 to $750,000. Annual maintenance fees range up to $150,000.

Aviptadil Manufacturing, Production and Distribution Agreements

On August 25, 2020, NeuroRx and Nephron Pharmaceuticals Corporation ("Nephron") signed an agreement for the manufacturing of finished pharmaceutical product of Aviptadil intravenous formulation and the development

of an inhaled (nebulizer) formulation of Aviptadil. Nephron will serve as the exclusive and primary supplier of the product for both clinical and commercial purposes, supplying 100% of the Company's annual requirements. The Company has agreed to purchase products from Nephron for a fixed price.

On September 29, 2020, NeuroRx and Cardinal Health signed an exclusive distribution agreement, as well as a 3rd party logistics agreement on October 1, 2020. Cardinal Health will manage warehousing, distribution, invoicing for the potential sale of Aviptadil in the United States and Puerto Rico.

On October 9, 2020, NeuroRx signed an agreement with Polypeptide for the supply of GMP grade Active Pharmaceutical Ingredient (API) Aviptadil (VIP). This gives NeuroRx a second source of procuring API. The Company has agreed to purchase a total of $1,010,000 worth of product and services over the contract.

Relief Therapeutics Collaboration Agreement

On September 18, 2020, the Company entered into a collaboration agreement with Relief for the clinical development and if approved the sale of Aviptadil. The collaboration provides for funding by Relief of certain clinical trials. If such candidate is approved by the FDA, the Company shall receive 50% of net product profits from the product sales in the NeuroRx territory, which includes the United States, Canada, and Israel; 15% of net product profits from the product sales in the Relief Therapeutics territory, which includes the European Union, Switzerland, Iceland, Norway, the UK, the Channel Islands, Liechtenstein, Monaco, Andorra, Malta, San Marino, and Vatican City; and 20% of net product profits from the product sales in all other countries. During 2020, the Company invoiced Relief $10,160,421 for reimbursable expenses and received $9,329,031 in payments from Relief for these reimbursable expenses. As of December 31, 2020, the Company had an accounts receivable balance due from Relief of $831,390, net of an allowance for doubtful accounts of $257,463. As of May 11, 2021, Relief has reimbursed NeuroRx $10,612,750 for expenses, but has not paid approximately $4,000,000 in invoiced costs associated with conduct of the IV clinical trial, reformulation, and manufacture of ZYESAMI. As of May 11, 2021, Relief has not funded the costs of the inhaled trial. NeuroRx has advised Relief that NeuroRx is funding those costs with other capital.

Share Subscription Facility Agreement - GEM

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

In November 2020, GEM introduced the Company to Big Rock. Although the Company has taken the position that the reverse merger transaction contemplated by the Merger Agreement (as defined below) would not require the issuance of the warrant, to resolve uncertainties around the application of the GEM Agreement, the Company and GEM agreed in March 2021 to issue a warrant to GEM and for the parties to use their good faith efforts to amend the GEM Agreement to meet U.S. requirements to issue registered shares. The warrant is not conditional upon any further events or completion of the merger.

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The warrant was issued March 28, 2021, for 1,053,738 shares of NeuroRx common stock at an exercise price of $15.84 per share (the "GEM Warrant") and the parties agreed that GEM would immediately partially exercise the warrant for the purchase of 473,486 shares ("Initial Exercised Shares") for $7.5 million. The GEM Warrant will be valid for a period of three years from the date the Company's stock is listed for trading on a national securities exchange or consummation of a reverse merger transaction.

This contingent liability at December 31, 2020, represented an obligation that resulted in the issuance of certain equity at a discounted per share price. As the amount was deemed probable and estimable by the Company at December 31, 2020, the Company recorded a liability of $39,486,139 to reflect the fair value of the GEM Warrant.

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

Merger with Big Rock Partners Acquisition Corp.

On December 13 2020, the Company entered into an Agreement and Plan of Merger ("Merger Agreement") with Big Rock. Under the terms of the transaction, Big Rock will issue to NeuroRx's current equity holders an aggregate of 50 million shares ("Per Share Merger Consideration") of Big Rock common stock for their interests in NeuroRx.

Subject to certain conditions, an aggregate of 25 million additional shares of Big Rock common stock ("Earnout Shares") will be issued to NeuroRx pre-merger equity holders if, prior to December 31, 2022, (1) the Company'sCOVID-19 drug receives emergency use authorization by the FDA and (2) the FDA accepts the Company's filing of its application to approve the Company's COVID-19 drug. In addition, subject to certain conditions, $100 million ("Earnout Cash") may be payable to NeuroRx pre-merger equity holders if, prior to December 31, 2022, either (1) FDA approval of the Company's COVID-19 Drug is obtained and the Company's COVID-19 Drug is listed in the FDA's "Orange Book" and (2) FDA approval of the Company's Antidepressant Drug Regimen is obtained and the Company's Antidepressant Drug Regimen is listed in the FDA's "Orange Book".

The Boards of Directors of both NeuroRx and Big Rock have unanimously approved the proposed transaction. Completion of the transaction is subject to approval by stockholders of NeuroRx and Big Rock and other customary closing conditions.

8. Equity

Common Stock

On March 1, 2020, the Company's board of directors authorized an increase to the authorized share capital from 14,060,001 shares of common stock to 20,000,000 shares of common stock with a par value of $0.001 per share.

The Company sold 171,796 and 536,354 shares of common stock during the years ended December 31, 2020 and 2019, respectively and received gross proceeds of $2,579,114 and net proceeds of $5,802,002, respectively. The

Company issued 9,500 shares of common stock with a fair value of $144,875 in settlement of accounts payable worth $103,258, and recognized a loss of $41,617 for the difference during the year ended December 31, 2020 and did not issue any such shares during the year ended December 31, 2019.

Preferred Stock

Series A, B-1, and B-1A Preferred Stock

The Company has authorized and issued 1,000,000 shares of Series A convertible preferred stock, 1,050,695 shares of Series B-1 convertible preferred stock, and 316,848 shares of Series B-1A convertible preferred stock, par value of $0.001 per share, convertible into one share of Common Stock for each preferred share (collectively, the "Preferred Stock") at any time, at the option of the holder. The Preferred Stock are not redeemable and the related stockholders are entitled to a subordinated liquidation preference should the Company liquidate or wind up operations. The preferences also include voting rights on an as-converted basis, ride-along rights, and an anti-dilution provision. The liquidation preference is $1.00 per share for the Series A convertible preferred stock, $7.58 per share for the Series B-1 convertible preferred stock, and $6.82 per share for the Series B-1A convertible preferred stock, plus any declared but unpaid dividends. Upon an initial public offering or merger under certain conditions the Preferred Stock will automatically convert into common stock.

Series B-2 Preferred Stock

In 2020, the Company authorized the issuance of 100,000 shares of Series B-2 Convertible Preferred Stock, par value of $0.001 per share, convertible into one share of Common Stock for each share of Series B-2 Convertible Preferred Stock held. In March 2020, 4,167 Series B-2 stock were issued. The Series B-2 Preferred stock are not redeemable and the related stockholders are entitled to a subordinated liquidation preference should the Company liquidate or wind up operations. The preferences also include voting rights on an as-converted basis, ride-along rights, and an anti-dilution provision. The liquidation preference is $12.00 per share plus any declared but unpaid dividends. The B-2 Convertible Preferred shares can be converted into one share of Common Stock (subject to adjustments for stock splits, recapitalization) at any time, at the option of the holder. Upon an initial public offering or merger under certain conditions the Series B-2 Preferred Stock will automatically convert into common stock.

Common Stock Warrants

On January 31, 2019, the Company issued 8,846 fully vested common stock warrants, exercisable at a per share price of $11.00 until they expire on January 30, 2024, to a vendor for financial advisory services provided in connection with the sale of the Company's common stock. The fair value on the date of issuance was $7.16 per warrant for a total fair value of $63,337.

On July 6, 2020, the Company issued 4,000 fully vested common stock warrants, exercisable at a per share price of $15.25 until they expire on July 5, 2023, to a vendor for financial advisory services provided in connection with the sale of the Company's common stock. The fair value on the date of issuance was $7.63 per warrant for a total fair value of $30,536.

On July 15, 2020, the Company issued 279,291 fully vested common stock warrants, exercisable at a per share price of $15.25 until they expire on July 14, 2025, to a board member. The fair value on the date of issuance was $9.63 per warrant for a total fair value of $2,689,684.

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

On October 23, 2020, the Company issued 139,645 and 139,645 fully vested common stock warrants, exercisable at a per share price of $15.25 until they expire on October 22, 2025, to a board member, respectively. The fair value on the date of issuance was $9.64 per warrant for a total fair value of $2,693,221.

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

	Total Warrants	Weighted Average Remaining Term	Weighted Average Exercise Price	Average Intrinsic Value
Outstanding as of December 31, 2018	48,627	2.88	$ 7.90	$ —
Issued	8,846	5.00	11.00	—
Outstanding as of December 31, 2019	57,473	2.22	$ 8.38	$ —
Issued	562,581	4.99	15.25	20,112,271
Outstanding as of December 31, 2020	620,054	11.08	$ 14.61	$ 22,127,594

The grant date fair value of common stock warrants is determined using the Black Scholes option-pricing model. The Company is a private company and estimates its expected stock volatility based on historical volatility of publicly traded peer companies. The estimated fair value of the Company's common stock is based on sales to third parties. The following assumptions were used during the following periods:

	December 31,	
	2020	2019
Strike price	$15.25	$11.00
Volatility rate	80.0%	80.0%
Risk-free rate	0.19%-0.28%	2.40%
Expected term	3.00-5.00	5.00
Dividend yield	—	—

9. Stock-Based Compensation

The Company's 2016 Omnibus Incentive Plan (the "Plan") permits the granting of incentive stock options, restricted stock awards, other stock-based award or other cash-based awards. The maximum aggregate shares of common stock that may be subject to awards and issued under the Plan is 500,000. In December 2020, the Company's board of directors authorized an additional 200,000 shares of common stock options to be authorized under the Plan for a total of 700,000 authorized shares. At December 31, 2020, 486,755 shares have been awarded and 213,245 shares remain available for issuance under the Plan.

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 private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies. Due to the lack of historical exercise history, the expected term of the Company's stock options for employees has been determined utilizing the "simplified" method for awards. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve. Expected dividend yield is zero based on the fact that the Company has never paid cash dividends and does not expect to pay any cash dividends in the foreseeable future. Additionally, certain options granted contain terms that require all

unvested options to immediately vest a) upon the approval of a New Drug Application (NDA) by the US Food and Drug Administration for NRX-101, or b) immediately preceding a change in control of the Company, whichever occurs first.

The fair value of the Company's common stock, which equaled the exercise price of stock options granted during the years ended December 31, 2020 and 2019, respectively, was determined based on sales of the Company's shares at arm's length to unrelated third parties.

The grant date fair value of employee and non-employee stock option awards is determined using the Black Scholes option-pricing model. The following assumptions were used during the following periods:

	December 31,	
	2020	2019
Exercise price	$11.00-$15.25	$11.00
Risk-free rate of interest	0.30%-0.49%	1.54%-1.73%
Expected term (years)	5.5-6.5	6.0-6.5
Expected stock price volatility	80%	80%
Dividend yield	—	—

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

	Number of shares	Weighted average exercise price	Weighted average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding as of December 31, 2018	355,408	$ 5.74	8.2	$ 1,782,729
Granted	28,180	11.00	9.6	
Forfeited/Cancelled	(50,000)	—	—	—
Outstanding as of December 31, 2019	333,588	$ 5.74	7.2	$ 1,782,729
Granted	266,500	14.37	9.7	9,761,125
Forfeited /Cancelled	(113,333)	—	—	—
Outstanding as of December 31, 2020	486,755	$ 10.79	8.8	$19,571,655
Options vested and exercisable as of December 31, 2020	329,489	$ 6.31	4.0	$14,723,342

The aggregate intrinsic value in the above table is calculated as the difference between fair value of the Company's common stock price and the exercise price of the stock options. The weighted average grant date fair value per share for employee stock and non-employee option grants during the years ended December 31, 2020 and 2019 was $9.64 and $7.69, respectively. At December 31, 2020, the total unrecognized compensation related to unvested employee and non-employee stock option awards granted was $2,193,874, which the Company expects to recognize over a weighted-average period of approximately 2.09 years.

Stock-based compensation expense related to stock options, in aggregate, has been reported in general and administrative expense in the amount of $332,065 and $321,087 and research and development expense in the amount of $398,340 and $112,823 in the Company's statements of operations for the years ended December 31, 2020 and 2019, respectively.

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

10. Income Taxes

A reconciliation of the statutory U.S. federal income tax rate to the Company's effective tax rate consist of the following:

	For the Years Ended December 31,	
	2020	2019
Statutory federal income tax benefit	(21.00)%	(21.00)%
Permanent items	(0.04)%	0.01%
Foreign rate differential	0.01%	(0.02)%
State taxes, net of federal tax benefit	(1.74)%	0.60%
Change in valuation allowance	23.01%	22.23%
R&D credit	(0.24)%	(1.90)%
Other	— %	0.07%
Effective tax rate	— %	— %

The components of income tax provision (benefit) are as follows:

	As of December 31,	
	2020	2019
Federal:		
Current	$ —	$ —
Deferred	(11,015,759)	(1,496,712)
State and Local:		
Current	—	—
Deferred	(900,789)	39,574
Foreign:		
Current	—	—
Deferred	2,867	(8,412)
Change in valuation allowance	11,913,681	1,465,550
Total	$ —	$ —

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Deferred income taxes reflect the net tax effects of temporary differences between the carrying value of assets and liabilities for financial reporting purposes and amounts used for income tax purposes. The temporary differences that give rise to deferred tax assets and liabilities are as follows:

	As of December 31,	
	2020	2019
Deferred tax assets (liabilities):		
Net operating loss carryforwards	$ 8,243,959	$ 6,943,988
Convertible notes payable discount and embedded derivative	—	101,521
Common stock warrants	1,405,796	179,271
Israel net operating loss carryforwards	128,469	131,336
Founder share options	469,062	472,195
Stock-based compensation	681,446	497,315
Settlement liability	9,005,860	—
Bonus accrual	120,995	—
Other	58,721	—
R&D credit	375,000	250,000
	20,489,308	8,575,626
Valuation allowance	(20,489,308)	(8,575,626)
Deferred tax assets, net of allowance	$ —	$ —

As of December 31, 2020 and 2019, the Company had federal and state net operating loss carryforwards of approximately $37,000,000 and $31,200,000, respectively. As of December 31, 2020 and 2019, the Company had approximately $559,000 and $547,000 of foreign net operating loss carryforwards, respectively. The federal, state and foreign net operating loss carryforwards generated in the tax years from 2015 to 2020 will begin to expire, if not utilized, by 2035. Utilization of the net operating loss carryforwards may be subject to an annual limitation according to Section 382 of the Internal Revenue Code of 1986 as amended, and similar provisions.

The Company has determined, based upon available evidence, that it is more likely than not that all of the net deferred tax asset will not be realized and, accordingly, has provided a full valuation allowance against its net deferred tax asset. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income, net operating loss carryback potential, and tax planning strategies in making these assessments.

The Company recorded approximately $1,000,000 as a reduction of the deferred tax asset due to uncertain tax positions that if recognized would reduce Federal and state net operating loss carryforwards and R&D credit carryforwards. In the next twelve months, the Company plans to file amended returns to reduce a portion of its uncertain tax position recorded in the current year.

The Company recognizes interest accrued to unrecognized tax benefits and penalties as income tax expense. The Company accrued total penalties and interest of $0 during the years ended December 31, 2020 and 2019 and in total, as of December 31, 2020 and 2019 has recognized penalties and interest of $0.

The Company files tax returns as prescribed by the tax laws of the jurisdictions in which they operate. In the normal course of business, the Company is subject to examination by federal and foreign jurisdictions where applicable based on the statute of limitations that apply in each jurisdiction. As of December 31, 2020, open years related to all jurisdictions are 2019, 2018, 2017, 2016 and 2015.

The Company has no open tax audits with any taxing authority as of December 31, 2020.

11. Related Party Transactions

The Company licenses patents that are owned by Glytech, LLC, pursuant to a license agreement (the Glytech Agreement). Glytech, LLC is owned by a co-founder and Director of the Company, and therefore, a related party. 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 NeuroRx. During the years ended December 31, 2020 and 2019, the Company paid a co-founder $272,929 and $464,720, respectively, for continuing technology support services and reimbursed expenses. These support services are ongoing.

The Fourth Amendment to the Glytech Agreement, effective as of December 31, 2020, includes an equity value-triggered transfer of Excluded Technology from Glytech to NeuroRx. 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 NeuroRx considers “pipeline” or “future product” opportunities, that contain a combination of pharmaceutical components different from those contained in NRX-100 and NRX-101. The Excluded Technology will transfer to the Company for no additional consideration if the value of NeuroRx equity held by Glytech exceeds $50,000,000 at any time prior to August 6, 2022. After August 6, 2022, the additional IP will transfer to the Company at no cost.

The CEO of the Company is a major shareholder in the Company. Therefore, his services are deemed to be a related party transaction. He serves the company on a full-time basis and has an employment agreement with the Company and received compensation of $456,459 and $452,400 during the years ended December 31, 2020 and 2019, respectively. The services are ongoing.

The CEO’s son provides services related to website, IT, and marketing support under the supervision of the Company’s Chief Commercial Officer, who is responsible for assuring that the services are provided on financial terms that are at market. NeuroRx paid this family member a total of $85,915 and $48,000 during the years ended December 31, 2020 and 2019, respectively.

In addition, NeuroRx pays Pill Tracker 2015 Ltd. (“Pill Tracker”) for services relating to the development of the inhaled use form of aviptadil. The CEO’s son and our CEO are the chief executive officer and the board chairman, respectively, of Pill Tracker. NeuroRx paid Pill Tracker $271,082 during the year ended December 31, 2020. NeuroRx made no payments to Pill Tracker in 2019.

The CEO’s other son, as a medical doctor, provides research services related to the development of the inhaled use form of aviptadil, under the supervision of the CEO, who is responsible for assuring that the services are provided on financial terms that are at market. NeuroRx paid this family member a total of $11,650 during the year ended December 31, 2020. NeuroRx made no payments to this family member in 2019.

Included in accounts payable were $149,067 and $92,744 due to the above related parties as of December 31, 2020 and 2019, respectively.

NeuroRx, Inc.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

12. Subsequent Events

Issuance of Common Stock

Subsequent to December 31, 2020, the Company sold 43,018 shares of common stock for gross proceeds of $2,495,058, and 79,400 shares of common stock for gross proceeds of $5,716,800.

Issuance of Stock Option Awards

Subsequent to December 31, 2020, the Company granted 42,500 stock option awards. The stock options will vest three years from the date of grant.

Aviptadil Supply Agreement

On January 4, 2021 NeuroRx and Aerogen Limited (“Aerogen”) signed a supply agreement for the supply of certain products, including the Areogen Solo Nebulizer System and Aerogen Ultra, solely for the purposes of carrying out clinical trials relating to inhalation delivery of RLF-100 (aviptadil) for treatment of pulmonary insufficiency and respiratory distress in COVID-19 patients. Pill Tracker is an agent of NeuroRx per the supply agreement and the first purchase order for products amounted to $54,315.

NeuroRx, Inc.

CONDENSED CONSOLIDATED BALANCE SHEETS

	March 31, 2021 (Unaudited)	December 31, 2020
ASSETS		
Current assets:		
Cash	$ 13,271,579	$ 1,858,513
Account receivable, net of allowance of $3,676,826 and $257,463 as of March 31, 2021 and December 31, 2020, respectively	—	831,390
Prepaid expenses and other current assets	290,090	240,352
Total current assets	13,561,669	2,930,255
Other assets	10,438	10,914
Total assets	$ 13,572,107	$ 2,941,169
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)		
Current liabilities:		
Accounts payable (includes $190,102 and $149,067 due to related parties)	$ 4,382,711	$ 3,153,310
Accrued and other current liabilities	1,160,907	1,728,483
Accrued clinical site costs	956,833	1,547,432
Notes payable and accrued interest	171,134	248,861
Dividends payable	7,589	7,589
Accrued settlement expense	—	39,486,139
Total current liabilities	6,679,174	46,171,814
Notes payable and accrued interest	509,925	547,827
Total liabilities	$ 7,189,099	$ 46,719,641
Stockholders' equity (deficit):		
Convertible series A preferred stock, $0.001 par value, 1,000,000 shares authorized, issued and outstanding at March 31, 2021 and December 31, 2020, liquidation preference of $1,000,000 at March 31, 2021 and December 31, 2020	$ 1,000	$ 1,000
Convertible series B-1 preferred stock, $0.001 par value, 1,050,695 shares authorized, issued and outstanding at March 31, 2021 and December 31, 2020, liquidation preference of $7,964,268 at March 31, 2021 and December 31, 2020	1,050	1,050
Convertible series B-1A preferred stock, $0.001 par value, 316,848 shares authorized, issued and outstanding at March 31, 2021 and December 31, 2020, liquidation preference of $2,159,608 at March 31, 2021 and December 31, 2020	317	317
Convertible series B-2 preferred stock, $0.001 par value, 100,000 shares authorized; 4,167 shares issued and outstanding at March 31, 2021 and December 31, 2020, liquidation preference of $50,004 at March 31, 2021 and December 31, 2020	4	4
Common stock, $0.001 par value, 20,000,000 shares authorized; 11,806,580 and 11,227,676 shares issued and outstanding at March 31, 2021 and December 31, 2020, respectively	11,807	11,228
Additional paid-in capital	122,037,424	46,387,649
Accumulated deficit	(115,668,594)	(90,179,720)
Total stockholders' equity (deficit)	6,383,008	(43,778,472)
Total liabilities and stockholders' equity (deficit)	$ 13,572,107	$ 2,941,169

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

NeuroRx, Inc.

CONDENSED CONSOLIDATED STATEMENT OF OPERATIONS

(Unaudited)

	Three months ended March 31,	
	2021	**2020**
Operating expenses:		
Research and development	$ 2,908,705	$ 604,334
General and administrative	2,101,402	615,653
Settlement expense	21,365,641	—
Reimbursement of expenses from Relief Therapeutics	(771,245)	—
Total operating expenses	25,604,503	1,219,987
Loss from operations	(25,604,503)	(1,219,987)
Other (income) expenses:		
Gain on extinguishment of debt	(120,810)	—
Interest expense	5,181	36,268
Change in fair value of embedded put	—	27,160
Loss on conversion of convertible notes payable	—	306,641
Total other (income) expenses	(115,629)	370,069
Loss before tax	(25,488,874)	(1,590,056)
Tax expense	—	—
Net loss	$ (25,488,874)	$ (1,590,056)
Net loss per share		
Basic and Diluted	$ (2.26)	$ (0.15)
Weighted average common shares outstanding		
Basic and Diluted	11,284,247	10,689,811

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

NeuroRx, Inc.

CONDENSED CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY (DEFICIT)

(Unaudited)

	Three months ended March 31, 2021 and 2020												
	Series A Convertible Preferred Stock		Series B-1A Convertible Preferred Stock		Series B-1 Convertible Preferred Stock		Series B-2 Convertible Preferred Stock		Common Stock		Additional Paid-in-Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount			
Balance - December 31, 2019	1,000,000	$1,000	316,848	$ 317	1,050,695	$ 1,050	—	$ —	10,686,191	$10,686	$ 33,538,813	$ (38,402,816)	$ (4,850,950)
Common stock issued	—	—	—	—	—	—	—	—	16,090	16	176,974	—	176,990
Series B-2 convertible preferred stock issued	—	—	—	—	—	—	4,167	4	—	—	50,000	—	50,004
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	88,803	—	88,803
Net loss	—	—	—	—	—	—	—	—	—	—	—	(1,590,056)	(1,590,056)
Balance - March 31, 2020	**1,000,000**	**$1,000**	**316,848**	**$ 317**	**1,050,695**	**$ 1,050**	**4,167**	**$ 4**	**10,702,281**	**$10,702**	**$ 33,854,590**	**$ (39,992,872)**	**$ (6,125,209)**
Balance - December 31, 2020	1,000,000	$1,000	316,848	$ 317	1,050,695	$ 1,050	4,167	$ 4	11,227,676	$11,228	$ 46,387,649	$ (90,179,720)	$(43,778,472)
Common stock issued	—	—	—	—	—	—	—	—	105,418	105	6,926,753	—	6,926,858
Issuance of common stock for exercise of warrant	—	—	—	—	—	—	—	—	473,486	474	7,499,544	—	7,500,018
Reclassification of settlement liability upon issuance of warrant	—	—	—	—	—	—	—	—	—	—	60,851,780	—	60,851,780
Stock-based compensation	—	—	—	—	—	—	—	—	—	—	371,698	—	371,698
Net loss	—	—	—	—	—	—	—	—	—	—	—	(25,488,874)	(25,488,874)
Balance - March 31, 2021	**1,000,000**	**$1,000**	**316,848**	**$ 317**	**1,050,695**	**$ 1,050**	**4,167**	**$ 4**	**11,806,580**	**$11,807**	**$122,037,424**	**$(115,668,594)**	**$ 6,383,008**

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

NeuroRx, Inc.

CONDENSED CONSOLIDATED STATEMENT OF CASH FLOWS

(Unaudited)

	Three months ended March 31,	
	2021	**2020**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net Loss	$ (25,488,874)	$ (1,590,056)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	476	—
Stock-based compensation	371,698	88,803
Gain on extinguishment of debt	(120,810)	—
Change in fair value of embedded put	—	27,160
Amortization of debt discount	—	16,454
Non-cash interest expense	5,181	24,460
Non-cash settlement expense	21,365,641	—
Loss on conversion of notes payable	—	306,641
Changes in operating assets and liabilities:		
Accounts receivable	831,390	—
Prepaid expenses and other assets	(49,738)	—
Accounts payable	1,229,401	298,528
Accrued expenses and other liabilities	(1,158,175)	(4,647)
Net cash used in operating activities	(3,013,810)	(832,657)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from issuance of series B-2 Preferred stock	—	50,004
Proceeds from issuance of common stock, net of transaction costs	14,426,876	176,990
Net cash provided by financing activities	14,426,876	226,994
Net increase in cash	11,413,066	(605,663)
Cash at beginning of year	1,858,513	877,421
Cash at end of year	$ 13,271,579	$ 271,758
Supplemental disclosure of cash flow information:		
Non-cash investing and financing activities		
Issuance of common stock for exercise of warrant	$ 7,500,018	$ —
Reclassification of settlement liability upon issuance of warrant	$ 60,851,780	$ —
Extinguishment of Paycheck Protection Program Loan	$ 120,810	$ —

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

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. Organization

The Business

NeuroRx, Inc. (the "Company" or "NeuroRx") was formed on May 20, 2015 and is incorporated in the State of Delaware. The Company established a wholly owned subsidiary, NeuroRx 2015 LTD (Israel), in December 2015, for the purpose of managing the continued development of a subset of the Company's technology.

The Company is a clinical stage pharmaceutical research and development company primarily engaged in the development of a drug regimen to treat patients with depression and suicidal ideation or behavior.

2. Liquidity

As of March 31, 2021, the Company had $13,271,579 in cash. Since inception the Company has experienced net losses and negative cash flows from operations each fiscal year. The Company has no revenues and expects to continue to incur operating losses for the foreseeable future, and may never become profitable. The Company is dependent on its ability to continue to raise equity and/or debt financing to continue operations, and the attainment of profitable operations. The Company has a collaboration agreement with Relief Therapeutics Holdings ("Relief"), which provided for funding by Relief of certain research and development expenses related to the U.S. development of ZYESAMI and the portion of corporate overhead attributable to that program. The proceeds received amounted to $771,245 for the three months ended March 31, 2021. On March 28, 2021, the Company received $7,500,018 from the exercise of a warrant for the purchase of 473,486 shares. Subsequent to December 31, 2020, Relief has declined to reimburse the Company for any additional expenses related to the IV clinical trials for the ZYESAMI. The IV clinical trails for the ZYESAMI were completed on February 24, 2021. Subsequent to March 31, 2021, the Company sold 19,736 shares of common stock for gross proceeds of $1,421,024. Accordingly, the Company believes that it currently has sufficient funds to support operations through the next twelve months from the date the condensed consolidated financial statements are issued. The Company cannot make any assurances that additional financings will be available to it and, if available, on acceptable terms or at all. This could negatively impact the Company's business and operations and could also lead to the reduction of the Company's operations.

COVID-19 Outbreak

On January 30, 2020, the World Health Organization ("WHO") announced a global health emergency because of a new strain of coronavirus originating in Wuhan, China (the "COVID-19 Outbreak") and the risks to the international community as the virus spreads globally beyond its point of origin. In March 2020, the WHO classified the COVID-19 Outbreak as a pandemic, based on the rapid increase in exposure globally.

The full impact of the COVID-19 Outbreak continues to evolve as of the date of this report. As such, the Company cannot estimate the full magnitude that the pandemic will have on the Company's business. If the COVID-19 Outbreak continues, it may have a material adverse effect on the Company's financial condition, liquidity, and future results of operations for the year ending December 31, 2021 and beyond. Management is actively monitoring the impact of the global pandemic on its financial condition, liquidity, operations, industry, and workforce. Given the daily evolution of the COVID-19 Outbreak and the global responses to curb its spread, the Company is not able to estimate the effects of the COVID-19 Outbreak on its results of operations, financial condition, or liquidity for the year ending December 31, 2021 and beyond.

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

3. Summary of Significant Accounting Policies

Basis of Presentation

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

Use of Estimates

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

Certain Risks and Uncertainties

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

Fair Value of Financial Instruments

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

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

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

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

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

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.

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, 2021 and the year ended December 31, 2020. The carrying amount of accounts payable approximated fair value as they are short term in nature. The fair value of warrants issued for settlement and services are estimated based on the Black-Scholes model during the three months ended March 31, 2021 and the year ended December 31, 2020. The carrying value of notes payable approximated the estimated fair values due to their recent issuances. The estimated fair value of the warrants and embedded put, represent Level 3 measurements.

Accounts Receivable

Accounts receivable consist of balances due from collaborative partners. In determining collectability, historical trends are evaluated, and specific partner issues are reviewed on a periodic basis to arrive at appropriate allowances. As of March 31, 2021, the Company has recorded an allowance for doubtful accounts of $3,676,826 as the Company does not expect to collect on amounts due to the Company owed from Relief.

Concentration of Credit Risk and Off-Balance Sheet Risk

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

Research and Development Costs

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

Stock-Based Compensation

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

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Income Taxes

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

Loss Per Share

Basic loss per share of common stock is computed by dividing net loss attributable to common stockholders by the weighted average number of shares of common stock outstanding for the period. Diluted loss per share excludes, when applicable, the potential impact of stock options, common stock warrant shares, and convertible preferred stock because their effect would be anti-dilutive due to our net loss. Since the Company had a net loss in each of the periods presented, basic and diluted net loss per common share are the same.

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 presented because their effect would have been anti-dilutive.

	Three Months Ended March 31	
	2021	2020
Convertible preferred stock as if converted	2,371,710	2,371,710
Stock options	489,255	220,255
Common stock warrants	1,200,307	57,474

Recent Accounting Pronouncements

In December 2019, the FASB issued ASU No. 2019-12,*Income Taxes: Simplifying the Accounting for Income Taxes.* This guidance removes certain exceptions related to the approach for intraperiod tax allocation, the methodology for calculating income taxes in an interim period, and the recognition of deferred tax liabilities for outside basis differences. This guidance also clarifies and simplifies other areas of ASC 740. This ASU will be effective for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. The Company does not expect this guidance to have a significant impact on its financial statements.

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

4. Accrued and Other Current Liabilities

Accrued and other current liabilities consisted of the following at the dates indicated:

	March 31, 2021 (Unaudited)	December 31, 2020
Accrued and other current liabilities:		
Accrued research and development expenses	$ 568,155	$ 586,426
Accrued employee expenses	530,500	530,500
Professional services	45,705	606,553
Other accrued liabilities	16,547	5,004
Total accrued and other current liabilities	$ 1,160,907	$ 1,728,483

5. Convertible Notes Payable

On February 12, 2020, a Qualified Financing Event (as defined below) occurred when the Company received cumulative investment proceeds in excess of $10,000,000 from the sale and issuance of common shares. The fair value of the Company's common shares were $11.00 per share. The 2017 Notes (as defined below) and the 2018 Notes (as defined below) in the aggregate principal amount of $2,800,000 were converted into 318,183 common shares (at the discounted price of $8.80 per share), and the related unpaid and accrued interest totaling $369,660 were also converted into 42,006 common shares of the Company (at the discounted price of $8.80 per share). Additionally, the Company recognized a loss on extinguishment for the difference between the carrying value of the convertible notes, unamortized debt discount, and the value of the embedded put option and the fair value of the common shares of $306,641 during the three months ended March 31, 2020. The Company issued the shares of common stock pursuant to this conversion on September 23, 2020.

2017 Convertible Notes Payable

On November 16, 2017 and November 19, 2017, the Company issued convertible notes ("2017 Notes"), as amended for aggregate gross proceeds of $2,500,000. The 2017 Notes accrued interest at a rate of 6% per annum and principal and interest were due and payable four years from the date of issuance. Upon either a sale of the Company's assets or all of its capital stock, or a change of control, the principal balance would double and be repaid. Upon closing of either a sale of the Company's shares for at least $10,000,000 or a public offering of the Company's securities ("Qualified Financing Event"), the outstanding principal balance will be converted into the number of such securities sold at a conversion price equal to 80% of the securities negotiated share price.

2018 Convertible Notes Payable

On January 5, 2018 and April 25, 2018, the Company issued convertible notes ("2018 Notes"), as amended for aggregate gross proceeds of $300,000. The 2018 Notes accrued interest at a rate of 6% per annum and were due and payable four years from the date of issuance. Upon either a sale of the Company's assets or all of its capital stock, or a change of control, the principal balance would double and be repaid. Upon closing of either a sale of the Company's shares for at least $10,000,000 or a public offering of the Company's securities ("Qualified Financing Event"), the outstanding principal balance will be converted into the number of such securities sold at a conversion price equal to 80% of the securities negotiated share price. The January 5, 2018 note for $100,000 was not amended and interest was unpaid, as such, that note and related accrued interest were classified as current liabilities. The April 25, 2018 note for $200,000 was amended similar to the 2017 Notes to accrue interest and to be paid at maturity with the principal.

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

The proceeds received upon issuing the 2017 Notes and 2018 Notes were first allocated to the fair value of the embedded put with the remainder to the debt host instrument. The Company recognized a loss of $0 and $27,160 during the three months ended March 31, 2021 and 2020, respectively, due to the estimated increase in fair value of the embedded put.

The discount is amortized to interest expense over the term of the debt. The Company amortized debt discount of $0 and $16,454 to interest expense during the three months ended March 31, 2021 and 2020, respectively. The Company paid no interest during the three months ended March 31, 2021 and 2020.

6. Notes Payable

	March 31, 2021 (Unaudited)	December 31, 2020
Note Payable — Related Party	$ 154,190	$ 154,190
Relief Therapeutics Loan	500,000	500,000
Paycheck Protection Program Loan	—	119,842
Carrying value of notes payable	654,190	774,032
Accrued interest	26,869	22,656
Note payable	$ 681,059	$ 796,688

	March 31, 2021 (Unaudited)	December 31, 2020
Notes payable:		
Notes payable and accrued interest, current	$ 171,134	$ 248,861
Notes payable and accrued interest,non-current	509,925	547,827
Total notes payable and accrued interest	$ 681,059	$ 796,688

Note Payable — Related Party

On July 1, 2019, the Company converted certain accounts payable into a loan (the "Note Payable — Related Party") with a related party in the amount of $154,190. The loan, in the form of a promissory note, matures on July 1, 2020. The principal amount of the loan and any accrued but unpaid interest shall be due and payable beginning July 1, 2019. All payments shall be applied first to accrued but unpaid interest, and then to outstanding principal. If not sooner paid, the entire remaining indebtedness (including accrued interest) shall be due and payable on July 1, 2020. The loan bears interest, compounded daily, at 6% annual interest. The loan continues to accrue interest as it was not paid off upon maturity.

Relief Therapeutics Loan

On April 6, 2020, the Company entered into a loan agreement with Relief Therapeutics (the "Relief Therapeutics Loan") in the amount of $500,000. The loan matures on April 6, 2022 and bears interest at 2% per annum payable in arrears.

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Paycheck Protection Program Loan

On April 28, 2020, the Company received $119,842 in loan funding from the Paycheck Protection Program (the "PPP Loan"), established pursuant to the Coronavirus Aid, Relief, and Economic Security Act (the "CARES Act") and administered by the U.S. Small Business Administration ("SBA"). The unsecured PPP Loan accrues interest on the outstanding principal at the rate of 1% per annum, and there is a six month deferment period until equal installment payments of $6,744 of principal and interest are due. The term of the PPP Loan is two years. To the extent the loan amount is not forgiven under the PPP, the Company is obligated to make equal monthly payments of principal and interest, beginning seven months from the date of the Note, until the maturity date. The Loan amount may be eligible for forgiveness pursuant to (1) at least 75% of the loan proceeds are used to cover payroll costs and the remainder is used for mortgage interest, rent and utility costs over the eight week period after the loan is made, and (2) the number of employees and compensation levels are generally maintained. Forgiveness of the loan is dependent on the Company having initially qualified for the loan and qualifying for the forgiveness of such loan based on future adherence to the forgiveness criteria. The Company used the entire PPP Loan for qualifying payroll expenses, and filed for loan forgiveness on December 30, 2020.

The Company received full forgiveness of all outstanding principal and accrued and unpaid interest on the PPP Loan as of February 11, 2021. The forgiveness of the PPP Loan qualified for debt extinguishment in accordance with ASC 470-50, *Debt Modifications and Extinguishments*, and as a result, the outstanding principal and accrued and unpaid interest was written off in the amount of $119,842 and $969, respectively, and the Company recorded a gain on extinguishment totaling $120,810 for the three months ended March 31, 2021.

7. Commitments and Contingencies

Operating Lease

The Company leases office space on a month-to-month basis. The rent expense for the three months ended March 31, 2021 and 2020 was $6,617 and $8,815, respectively.

Sponsored Research Agreement with National Jewish Health

On February 8 2021, the Company entered into a Sponsored Research Agreement ("Research Agreement") with National Jewish Health ("NJ Health"), a Colorado not-for-profit institution. Under the terms of the Research Agreement, NeuroRx agreed to sponsor a research study at NJ Health relating to the impact of NeuroRx's Aviptadil on propagation of SARS-CoV-2 in alveolar type II cells in vitro (the "Study"). In return for performance of the Study under the Research Agreement, NeuroRx has committed to pay NJ Health approximately $360,450. During three months ended March 31, 2021, NeuroRx paid NJ Health $126,157 of the total committed amount.

Aviptadil Manufacturing, Production, Supply and Distribution Agreements

On August 25, 2020, NeuroRx and Nephron Pharmaceuticals Corporation ("Nephron") signed an agreement for the manufacturing of finished pharmaceutical product of Aviptadil intravenous formulation and the development of an inhaled (nebulizer) formulation of Aviptadil. Nephron will serve as the exclusive and primary supplier of the product for both clinical and commercial purposes, supplying 100% of the Company's annual requirements. The Company has agreed to purchase products from Nephron for a fixed price.

On September 29, 2020, NeuroRx and Cardinal Health signed an exclusive distribution agreement, as well as a 3rd party logistics agreement on October 1, 2020. Cardinal Health will manage warehousing, distribution, invoicing for the potential sale of Aviptadil in the United States and Puerto Rico.

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

On October 9, 2020, NeuroRx signed an agreement with Polypeptide for the supply of GMP grade Active Pharmaceutical Ingredient (API) Aviptadil (VIP). This gives NeuroRx a second source of procuring API. The Company has agreed to purchase a total of $1,010,000 worth of product and services over the contract.

On January 4, 2021 NeuroRx and Aerogen Limited ("Aerogen") signed a supply agreement for the supply of certain products, including the Areogen Solo Nebulizer System and Aerogen Ultra, solely for the purposes of carrying out clinical trials relating to inhalation delivery of Aviptadil for treatment of pulmonary insufficiency and respiratory distress in COVID-19 patients. Pill Tracker is an agent of NeuroRx per the supply agreement and the first purchase order for products amounted to $54,315.

Relief Therapeutics Collaboration Agreement

On September 18, 2020, the Company entered into a collaboration agreement with Relief for the clinical development and if approved the sale of Aviptadil. The collaboration provides for funding by Relief of certain clinical trials. If such candidate is approved by the FDA, the Company shall receive 50% of net product profits from the product sales in the NeuroRx territory, which includes the United States, Canada, and Israel; 15% of net product profits from the product sales in the Relief Therapeutics territory, which includes the European Union, Switzerland, Iceland, Norway, the UK, the Channel Islands, Liechtenstein, Monaco, Andorra, Malta, San Marino, and Vatican City; and 20% of net product profits from the product sales in all other countries. During 2021, the Company invoiced Relief $4,190,608 for reimbursable expenses and received $770,444 in payments from Relief for these reimbursable expenses. The Company recorded an allowance for doubtful accounts of $3,676,826 as of March 31, 2021, due to the fact that the Company does not expect to receive payment for the remaining invoices, thus fully reserving for the accounts receivable balance. As of May 14, 2021, Relief has reimbursed NeuroRx $10,904,065 for expenses, but has subsequently declined to pay approximately $4 million in invoiced costs associated with conduct of the IV clinical trial, reformulation, and manufacture of ZYESAMI. Relief has additionally declined to fund the costs of the inhaled trial. NeuroRx has advised Relief that NeuroRx is funding those costs with other capital.

Share Subscription Facility Agreement — GEM

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

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

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

The warrant was issued March 28, 2021, for 1,053,738 shares of NeuroRx common stock at an exercise price of $15.84 per share (the "GEM Warrant") and the parties agreed that GEM would immediately partially exercise the warrant for the purchase of 473,486 shares ("Initial Exercised Shares") for $7,500,018. The GEM Warrant will be valid for a period of three years from the date the Company's stock is listed for trading on a national securities exchange or consummation of a reverse merger transaction.

This contingent liability at December 31, 2020, represented an obligation that resulted in the issuance of certain equity at a discounted per share price. As the amount was deemed probable and estimable by the Company at December 31, 2020, the Company recorded a liability of $39,486,139 to reflect the fair value of the GEM Warrant. On March 28, 2021, the Company recorded additional settlement liability of $21,365,641 to reflect the change in the fair value of the Company's common stock. On March 28, 2021, the Company reclassed the settlement liability to equity upon the issuance of the GEM Warrant.

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

Merger with Big Rock Partners Acquisition Corp.

On December 13 2020, the Company entered into an Agreement and Plan of Merger ("Merger Agreement") with Big Rock. Under the terms of the transaction, Big Rock will issue to NeuroRx's current equity holders an aggregate of 50 million shares ("Per Share Merger Consideration") of Big Rock common stock for their interests in NeuroRx.

Subject to certain conditions, an aggregate of 25 million additional shares of Big Rock common stock ("Earnout Shares") will be issued to NeuroRx pre-merger equity holders if, prior to December 31, 2022, (1) the Company'sCOVID-19 drug receives emergency use authorization by the FDA and (2) the FDA accepts the Company's filing of its application to approve the Company's COVID-19 drug. In addition, subject to certain conditions, $100 million ("Earnout Cash") may be payable to NeuroRx pre-merger equity holders if, prior to December 31, 2022, either (1) FDA approval of the Company's COVID-19 Drug is obtained and the Company's COVID-19 Drug is listed in the FDA's "Orange Book" and (2) FDA approval of the Company's Antidepressant Drug Regimen is obtained and the Company's Antidepressant Drug Regimen is listed in the FDA's "Orange Book".

The Boards of Directors of both NeuroRx and Big Rock have unanimously approved the proposed transaction. Completion of the transaction is subject to approval by stockholders of NeuroRx and Big Rock and other customary closing conditions.

8. Equity

Common Stock

The Company sold 105,418 and 16,090 shares of common stock during three months ended March 31, 2021 and 2020, respectively and received gross proceeds of $6,926,858 and $176,990, respectively.

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Preferred Stock

Series A, B-1, and B-1A Preferred Stock

The Company has authorized and issued 1,000,000 shares of Series A convertible preferred stock, 1,050,695 shares of Series B-1 convertible preferred stock, and 316,848 shares of Series B-1A convertible preferred stock, par value of $0.001 per share, convertible into one share of Common Stock for each preferred share (collectively, the "Preferred Stock") at any time, at the option of the holder. The Preferred Stock are not redeemable and the related stockholders are entitled to a subordinated liquidation preference should the Company liquidate or wind up operations. The preferences also include voting rights on an as-converted basis, ride-along rights, and an anti-dilution provision. The liquidation preference is $1.00 per share for the Series A convertible preferred stock, $7.58 per share for the Series B-1 convertible preferred stock, and $6.82 per share for the Series B-1A convertible preferred stock, plus any declared but unpaid dividends. Upon an initial public offering or merger under certain conditions the Preferred Stock will automatically convert into common stock.

Series B-2 Preferred Stock

In 2020, the Company authorized the issuance of 100,000 shares of Series B-2 Convertible Preferred Stock, par value of $0.001 per share, convertible into one share of Common Stock for each share of Series B-2 Convertible Preferred Stock held. In March 2020, 4,167 Series B-2 stock were issued. The Series B-2 Preferred stock are not redeemable and the related stockholders are entitled to a subordinated liquidation preference should the Company liquidate or wind up operations. The preferences also include voting rights on an as-converted basis, ride-along rights, and an anti-dilution provision. The liquidation preference is $12.00 per share plus any declared but unpaid dividends. The B-2 Convertible Preferred shares can be converted into one share of Common Stock (subject to adjustments for stock splits, recapitalization) at any time, at the option of the holder. Upon an initial public offering or merger under certain conditions the Series B-2 Preferred Stock will automatically convert into common stock.

Common Stock Warrants

On March 28, 2021, the Company issued 1,053,738 fully vested common stock warrants, exercisable at a per share price of $15.84 until they expire on March 27, 2024 to GEM (See Note 7). The fair value on the date of issuance was $60,851,779. Upon issuance, 473,486 warrants were immediately exercised generating gross proceeds of $7,500,018.

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

	Total Warrants	Weighted Average Remaining Term	Weighted Average Exercise Price	Aggregate Intrinsic Value
Outstanding as of December 31, 2020	620,055	11.08	$ 14.61	$ 22,127,594
Issued	1,053,738	3.00	15.84	59,177,926
Exercised	(473,486)		(15.84)	(26,590,974)
Outstanding as of March 31, 2021	1,200,306	6.80	$ 15.21	$ 54,714,546

The grant date fair value of common stock warrants is determined using the Black Scholes option-pricing model. The Company is a private company and estimates its expected stock volatility based on historical volatility of publicly traded peer companies. The estimated fair value of the Company's common stock is based on sales to third parties. The following assumptions were used during the following periods:

	March 31, 2021	December 31, 2020
Strike price	$15.84	$15.25
Volatility rate	80.0%	80.0%
Risk-free rate	0.31%	0.19%-0.28%
Expected term	3.00	3.00-5.00
Dividend yield	—	—

9. Stock-Based Compensation

The Company's 2016 Omnibus Incentive Plan (the "Plan") permits the granting of incentive stock options, restricted stock awards, other stock-based award or other cash-based awards. The maximum aggregate shares of common stock that may be subject to awards and issued under the Plan is 700,000. At March 31, 2021, 489,255 shares have been awarded and 210,745 shares remain available for issuance under the Plan.

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 private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies. Due to the lack of historical exercise history, the expected term of the Company's stock options for employees has been determined utilizing the "simplified" method for awards. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve. Expected dividend yield is zero based on the fact that the Company has never paid cash dividends and does not expect to pay any cash dividends in the foreseeable future. Additionally, certain options granted contain terms that require all unvested options to immediately vest a) upon the approval of a New Drug Application (NDA) by the US Food and Drug Administration for NRX-101, or b) immediately preceding a change in control of the Company, whichever occurs first.

The fair value of the Company's common stock, which equaled the exercise price of stock options granted during the three months ended March 31, 2021 and 2020, respectively, was determined based on sales of the Company's shares at arm's length to unrelated third parties.

The grant date fair value of employee and non-employee stock option awards is determined using the Black Scholes option-pricing model. The following assumptions were used during the following periods:

	March 31, 2021	December 31, 2020
Exercise price	$58.00	$11.00-$15.25
Risk-free rate of interest	0.20%-0.34%	0.30%-0.49%
Expected term (years)	6.0	5.5-6.5
Expected stock price volatility	80%	80%
Dividend yield	—	—

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

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

	Number of shares	Weighted average exercise price	Weighted average remaining contractual life (in years)	Aggregate intrinsic value
Outstanding as of December 31, 2020	486,755	$ 10.79	8.8	$19,571,655
Granted	42,500	58.00	9.8	595,000
Forfeited	(40,000)	—	—	—
Outstanding as of March 31, 2021	489,255	$ 14.58	8.7	$30,388,510
Options vested and exercisable as of March 31, 2021	376,493	$ 6.21	4.0	$24,771,202

The aggregate intrinsic value in the above table is calculated as the difference between fair value of the Company's common stock price and the exercise price of the stock options. The weighted average grant date fair value per share for employee stock and non-employee option grants during the three months ended March 31, 2021 was $41.97 and there were no employee stock or non-employee options granted during the three months ended March 31, 2020. At March 31, 2021, the total unrecognized compensation related to unvested employee and non-employee stock option awards granted was $3,188,792, which the Company expects to recognize over a weighted-average period of approximately 1.84 years.

Stock-based compensation expense related to stock options, in aggregate, has been reported in general and administrative expense in the amount of $344,034 and $66,588 and research and development expense in the amount of $27,664 and $22,215 in the Company's statements of operations for the three months ended March 31, 2021 and 2020, respectively.

10. Income Taxes

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

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.

On March 27, 2020, Congress enacted the CARES Act to provide certain relief as a result of the COVID-19 pandemic. The CARES Act, among other things, includes provisions relating to net operating loss carryback periods, alternative minimum tax credit refunds, and modification to the net interest deduction limitations. The CARES Act did not have a material impact on the Company's consolidated financial statements for the three months ended March 31, 2021. The Company continues to monitor any effects on its financial statements that may result from the CARES Act.

The Company has no open tax audits with any taxing authority as of March 31, 2021.

11. Related Party Transactions

The Company licenses patents that are owned by Glytech, LLC, pursuant to a license agreement (the Glytech Agreement). Glytech, LLC is owned by a co-founder and Director of the Company, and therefore, a related party.

NeuroRx, Inc.

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

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 NeuroRx. During the three months ended March 31, 2021 and 2020 the Company paid a co-founder $0 and $82,569, respectively, for continuing technology support services and reimbursed expenses. These support services are ongoing.

The Fourth Amendment to the Glytech Agreement, effective as of December 31, 2020, includes an equity value-triggered transfer of Excluded Technology from Glytech to NeuroRx. 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 NeuroRx considers “pipeline” or “future product” opportunities, that contain a combination of pharmaceutical components different from those contained in NRX-100 and NRX-101. The Excluded Technology will transfer to the Company for no additional consideration if the value of NeuroRx equity held by Glytech exceeds $50,000,000 at any time prior to August 6, 2022. After August 6, 2022, the additional IP will transfer to the Company at no cost.

The CEO of the Company is a major shareholder in the Company. Therefore, his services are deemed to be a related party transaction. He serves the company on a full-time basis and has an employment agreement with the Company and received compensation of $148,750 and $68,750 during the three months ended March 31, 2021 and 2020, respectively. The services are ongoing.

The CEO’s son provides services related to website, IT, and marketing support under the supervision of the Company’s Chief Commercial Officer, who is responsible for assuring that the services are provided on financial terms that are at market. NeuroRx paid this family member a total of $18,640 and $22,165 during the three months ended March 31, 2021 and 2020, respectively.

In addition, NeuroRx pays Pill Tracker 2015 Ltd. (“Pill Tracker”) for services relating to the development of the inhaled use form of aviptadil. The CEO’s son and our CEO are the chief executive officer and the board chairman, respectively, of Pill Tracker. NeuroRx paid Pill Tracker $140,821 and $0 during the three months ended March 31, 2021 and 2020.

The CEO’s other son, as a medical doctor, provides research services related to the development of the inhaled use form of aviptadil, under the supervision of the CEO, who is responsible for assuring that the services are provided on financial terms that are at market. NeuroRx paid this family member a total of $1,495 and $0 during the three months ended March 31, 2021 and 2020.

Included in accounts payable were $348,942 and $149,067 due to the above related parties as of March 31, 2021 and December 31, 2020, respectively.

12. Subsequent Events

Issuance of Common Stock

Subsequent to March 31, 2021, the Company sold 19,736 shares of common stock for net proceeds of $1,421,024, and 1,000 shares of common stock for net proceeds of $15,250.

Issuance of Stock Option Awards

Subsequent to March 31, 2021, the Company granted 3,500 stock option awards. The stock options will vest three years from the date of grant.

Merger with Big Rock Acquisition Corp.

On May 24, 2021, the Company completed the merger with Big Rock (See Note 7) with the Company being the surviving entity. Upon the closing, Big Rock changed its name to NRX Pharmaceuticals, Inc. (“NRx Pharmaceuticals or NRXP”).

At the effective time of the Business Combination, or the Effective Time, each share of NeuroRx preferred stock and common stock issued and outstanding immediately prior to the Effective Time converted into the right to receive 3.16 shares of Big Rock common stock plus two contingent value rights. The first contingent value right was the right to receive 1.58 additional shares of NRXP stock if, prior to December 31, 2022, the NeuroRx COVID-19 Drug receives Emergency Use Authorization by the FDA and NRXP submits and the FDA files for review a new drug application for the NeuroRx COVID-19 Drug. The second contingent value right was the right to receive approximately $5 per share of NeuroRx common stock upon the earlier to occur of (a) FDA approval of the NeuroRx COVID-19 Drug and the listing of the NeuroRx COVID-19 Drug in the FDA’s “Orange Book” and (b) FDA approval of the NeuroRx Antidepression Drug Regimen and the listing of the NeuroRx Antidepression Drug Regimen in the FDA’s “Orange Book”, in each case prior to December 31, 2022.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and Board of Directors of
Big Rock Partners Acquisition Corp.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Big Rock Partners Acquisition Corp. (the "Company") as of December 31, 2020 and 2019, the related consolidated statements of operations, changes in stockholders' equity and cash flows for each of the two years in the period ended December 31, 2020, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2020, in conformity with accounting principles generally accepted in the United States of America.

Restatement of the 2020 Financial Statements

As discussed in Note 2 to the consolidated financial statements, the accompanying consolidated financial statements as of December 31, 2020 and for the year ended December 31, 2020, have been restated.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (the "PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audit, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audit included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion.

/s/ Marcum LLP

Marcum LLP

We have served as the Company's auditor since 2019**.**

New York, NY
April 1, 2021, except for the effects of the restatements discussed for
warrants in Note 2, for which the date is May 11, 2021.

BIG ROCK PARTNERS ACQUISITION CORP.

CONSOLIDATED BALANCE SHEETS

	December 31,	
	2020 (As Restated)	2019
ASSETS		
Current assets		
Cash	$ 466	$ 6
Prepaid expenses	30,350	69,483
Prepaid income taxes	51,642	—
Total Current Assets	82,458	69,489
Cash and marketable securities held in Trust Account	5,967,947	32,005,205
TOTAL ASSETS	**$ 6,050,405**	**$ 32,074,694**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities — accounts payable and accrued expenses	$ 609,509	$ 622,441
Warrant liability	655,098	—
Promissory note — related party	862,148	416,141
Promissory notes payable	1,809,889	1,535,623
TOTAL LIABILITIES	**3,936,644**	**2,574,205**
Commitments and Contingencies (Note 7)		
Common stock subject to possible redemption, -0- and 2,305,335 shares at redemption value at December 31, 2020 and 2019, respectively	—	24,500,488
Stockholders' Equity		
Preferred stock, $0.001 par value; 1,000,000 shares authorized; none issued and outstanding	—	—
Common stock, $0.001 par value; 100,000,000 shares authorized; 2,688,242 and 2,844,414 shares issued and outstanding (excluding -0- and 2,305,335 shares subject to possible redemption) at December 31, 2020 and 2019, respectively	2,688	2,844
Additional paid-in capital	2,831,088	4,627,662
(Accumulated deficit)/retained earnings	(720,015)	369,495
Total Stockholders' Equity	**2,113,761**	**5,000,001**
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	**$ 6,050,405**	**$ 32,074,694**

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

BIG ROCK PARTNERS ACQUISITION CORP.

STATEMENTS OF OPERATIONS

	Year Ended December 31,	
	2020 (As Restated)	2019
Operating and formation costs	$ 907,406	$ 713,187
Loss from operations	**(907,406)**	**(713,187)**
Other income:		
Forgiveness of debt	352,071	—
Interest earned on marketable securities held in Trust Account	138,764	1,205,820
Change in fair value of warrant liability	(655,098)	—
Other income, net	**(164,263)**	**1,205,820**
(Loss) income before provision for income taxes	(1,071,669)	492,633
Provision for income taxes	(17,841)	(84,206)
Net (loss) income	**$(1,089,510)**	**$ 408,427**
Basic and diluted weighted average shares outstanding, Common stock subject to possible redemption	546,586	4,555,229
Basic and diluted net loss per share, Common stock subject to possible redemption	$ —	$ 0.15
Basic and diluted weighted average shares outstanding, Non-redeemable common stock	2,736,258	2,783,021
Basic and diluted net loss per share, Non-redeemable common stock	**$ (0.40)**	**$ (0.11)**

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

BIG ROCK PARTNERS ACQUISITION CORP.

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY

	Common Stock		Additional Paid-in Capital	Retained Earnings/ (Accumulated Deficit)	Total Stockholders' Equity
	Shares	Amount			
Balance — January 1, 2019	**2,725,039**	**$ 2,725**	**$ 5,036,213**	**$ (38,932)**	**$ 5,000,006**
Change in value of common stock subject to possible redemption	119,375	119	(688,551)	—	(688,432)
Capital contribution to Trust Account to extend the date by which the Company is required to consummate a Business Combination	—	—	280,000	—	280,000
Net income	—	—	—	408,427	408,427
Balance — December 31, 2019	**2,844,414**	**2,844**	**4,627,662**	**369,495**	**5,000,001**
Change in value of common stock subject to possible redemption	128,386	(128)	(1,497,349)	—	(1,497,477)
Redemption of share related to extension proxy vote	(27,786)	(28)	(299,225)	—	(299,253)
Net loss	—	—	—	(1,089,510)	(1,089,510)
Balance — December 31, 2020 (As Restated)	**2,688,242**	**$ 2,688**	**$ 2,831,088**	**$ (720,015)**	**$ 2,113,761**

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

BIG ROCK PARTNERS ACQUISITION CORP.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,	
	2020 (As Restated)	2019
Cash Flows from Operating Activities:		
Net (loss) income	$ (1,089,510)	$ 408,427
Adjustments to reconcile net (loss) income to net cash used in operating activities:		
Interest earned on marketable securities held in Trust Account	(138,764)	(1,205,820)
Change in fair value of warrant liability	655,098	—
Forgiveness of debt	(352,071)	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(30,350)	19,114
Prepaid incomes taxes	17,841	(69,483)
Accounts payable and accrued expenses	339,139	71,342
Income taxes payable	—	(16,311)
Net cash used in operating activities	**(598,617)**	**(792,731)**
Cash Flows from Investing Activities:		
Investment of cash in Trust Account	(282,626)	(993,099)
Cash withdrawn from Trust Account to pay redeeming stockholders	26,297,218	40,726,687
Cash withdrawn from Trust Account to pay franchise and income taxes	161,430	512,993
Net cash provided by investing activities	**26,176,022**	**40,246,581**
Cash Flows from Financing Activities:		
Proceeds from promissory notes	274,266	845,623
Proceeds from promissory note — related party	481,007	481,141
Repayment of promissory note — related party	(35,000)	(65,000)
Redemption of common stock	(26,297,218)	(40,726,687)
Net cash used in financing activities	**(25,576,945)**	**(39,464,923)**
Net Change in Cash	**460**	**(11,073)**
Cash — Beginning of period	6	11,079
Cash — End of period	**$ 466**	**$ 6**
Supplemental cash flow information:		
Cash paid for income taxes	$ —	$ 170,000
Non-Cash investing and financing activities:		
Change in value of common stock subject to possible redemption	$ 1,497,477	$ 688,432
Capital contribution to Trust Account	$ —	$ 280,000

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

BIG ROCK PARTNERS ACQUISITION CORP.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. DESCRIPTION OF ORGANIZATION AND BUSINESS OPERATIONS

Big Rock Partners Acquisition Corp. (the "Company") is a blank check company incorporated in Delaware on September 18, 2017. The Company was formed for the purpose of acquiring, through a merger, share exchange, asset acquisition, stock purchase, reorganization, recapitalization, or other similar business transaction, one or more operating businesses or entities (a "Business Combination"). The Company is not limited to a particular industry or geographic region for purposes of consummating a Business Combination.

The Company has one subsidiary, Big Rock Merger Corp., a wholly-owned subsidiary of the Company incorporated in Delaware on January 22, 2019 ("Merger Sub").

All activity through December 31, 2020 relates to the Company's formation, its initial public offering ("Initial Public Offering"), which is described below, identifying a target company for a Business Combination, and activities in connection with the proposed acquisition of NeuroRx, Inc., a Delaware corporation ("NeuroRx") (see Note 8).

The registration statement for the Company's Initial Public Offering was declared effective on November 20, 2017. On November 22, 2017, the Company consummated the Initial Public Offering of 6,000,000 units (the "Units" and, with respect to the common stock included in the Units being offered, the "Public Shares"), generating gross proceeds of $60,000,000, which is described in Note 4. Each Unit consists of one share of common stock, one right ("Public Right") and one-half of one warrant ("Public Warrant"). Each Public Right will convert intoone-tenth (1/10) of one share of common stock upon consummation of a Business Combination. Each whole Public Warrant entitles the holder to purchase one share of common stock at an exercise price of $11.50 per whole share.

Simultaneously with the Initial Public Offering, the Company consummated the sale of 250,000 units (the "Private Placement Units") at a price of $10.00 per Unit in a private placement to Big Rock Partners Sponsor, LLC (the "Sponsor"), generating gross proceeds of $2,500,000, which is described in Note 5.

Following the closing of the Initial Public Offering, $60,000,000 ($10.00 per Unit) from the net proceeds of the sale of the Units in the Initial Public Offering and the Private Placement Units was placed in a trust account (the "Trust Account") which may be invested in U.S. government securities, within the meaning set forth in Section 2(a)(16) of the Investment Company Act of 1940, as amended (the "Investment Company Act"), with a maturity of 180 days or less or in any open-ended investment company that holds itself out as a money market fund selected by the Company meeting the conditions of Rule 2a-7 of the Investment Company Act, as determined by the Company, until the earlier of: (i) the consummation of a Business Combination or (ii) the distribution of the Trust Account, as described below.

On November 29, 2017, in connection with the underwriters' exercise of their over-allotment option in full, the Company consummated the sale of an additional 900,000 Units, and the sale of an additional 22,500 Private Placement Units at $10.00 per unit, generating total gross proceeds of $9,225,000. A total of $9,000,000 of the net proceeds were deposited in the Trust Account, bringing the aggregate proceeds held in the Trust Account to $69,000,000.

At the closing of the Initial Public Offering, the Company issued EarlyBirdCapital, Inc. ("EarlyBirdCapital") and its designees 120,000 shares of common stock (the "Representative Shares"). On November 29, 2017, the Company issued an additional 18,000 Representative Shares for no consideration (see Note 9).

Transaction costs amounted to $2,172,419, consisting of $1,725,000 of underwriting fees and $447,419 of Initial Public Offering costs.

The Company's management has broad discretion with respect to the specific application of the net proceeds of the Initial Public Offering and Private Placement Units, although substantially all of the net proceeds are intended to be applied generally toward consummating a Business Combination. The Company's initial Business Combination must be with one or more target businesses that together have a fair market value equal to at least 80% of the balance in the Trust Account (excluding taxes payable on income earned on the Trust Account) at the time of the signing an agreement to enter into a Business Combination. The Company will only complete a Business Combination if the post-Business Combination company owns or acquires 50% or more of the outstanding voting securities of the target or otherwise acquires a controlling interest in the target sufficient for it not to be required to register as an investment company under the Investment Company Act. There is no assurance that the Company will be able to successfully effect a Business Combination.

The Company will provide its stockholders with the opportunity to redeem all or a portion of their shares included in the Units sold in the Initial Public Offering (the "Public Shares") upon the completion of a Business Combination either (i) in connection with a stockholder meeting called to approve the Business Combination or (ii) by means of a tender offer. The decision as to whether the Company will seek stockholder approval of a Business Combination or conduct a tender offer will be made by the Company, solely in its discretion. The stockholders will be entitled to redeem their shares for a pro rata portion of the amount then on deposit in the Trust Account ($10.00 per share, plus any pro rata interest earned on the funds held in the Trust Account and not previously released to the Company to pay its franchise and income tax obligations). There will be no redemption rights upon the completion of a Business Combination with respect to the Company's warrants.

The Company will proceed with a Business Combination if the Company has net tangible assets of at least $5,000,001 upon such consummation of a Business Combination and, if the Company seeks stockholder approval, a majority of the outstanding shares voted are voted in favor of the Business Combination. If a stockholder vote is not required by law and the Company does not decide to hold a stockholder vote for business or other legal reasons, the Company will, pursuant to its Amended and Restated Certificate of Incorporation, conduct the redemptions pursuant to the tender offer rules of the Securities and Exchange Commission (the "SEC"), and file tender offer documents with the SEC prior to completing a Business Combination. If, however, a stockholder approval of the transaction is required by law, or the Company decides to obtain stockholder approval for business or other legal reasons, the Company will offer to redeem shares in conjunction with a proxy solicitation pursuant to the proxy rules and not pursuant to the tender offer rules. If the Company seeks stockholder approval in connection with a Business Combination, the Company's Sponsor, officers and directors (the "Initial Stockholders") have agreed (a) to vote their Founder's Shares (as defined in Note 6), Placement Shares (as defined in Note 5) and any Public Shares held by them in favor of approving a Business Combination and (b) not to convert any Founder's Shares, Placement Shares and any Public Shares held by them in connection with a stockholder vote to approve a Business Combination or sell any such shares to the Company in a tender offer in connection with a Business Combination. Additionally, each public stockholder may elect to redeem their Public Shares irrespective of whether they vote for or against the proposed transaction.

The Company initially had until November 22, 2018 to complete a Business Combination. However, if the Company anticipated that it would not be able to consummate a Business Combination by November 22, 2018, the Company could extend the period of time to consummate a Business Combination up to two times, each by an additional three months. Pursuant to the terms of the Company's Amended and Restated Certificate of Incorporation and the trust agreement entered into between the Company and Continental Stock Transfer & Trust Company on November 20, 2017, in order to extend the time available for the Company to consummate a Business Combination, the Sponsor or its affiliates or designees must deposit into the Trust Account $690,000 ($0.10 per share) for each three month extension, up to an aggregate of $1,380,000, or $0.20 per share, if the Company extends for the full six months, on or prior to the date of the applicable deadline.

On November 20, 2018, the period of time for the Company to consummate a Business Combination was extended for an additional three-month period ending on February 22, 2019, and, accordingly, $690,000 was deposited into the Trust Account. On February 21, 2019, the Company further extended the time required to

consummate a Business Combination to May 22, 2019 and deposited an additional $690,000 into the Trust Account. The deposits were funded by non-interest bearing unsecured promissory notes from BRAC Lending Group LLC, an affiliate of the underwriter ("BRAC") (see Note 7). The notes are repayable upon the consummation of a Business Combination (see Note 7).

On May 21, 2019, the Company's stockholders approved an amendment to its Amended and Restated Certificate of Incorporation to extend the period of time for which the Company was required to consummate a Business Combination to August 22, 2019. The number of shares of common stock presented for redemption in connection with the extension was 2,119,772. The Company paid cash in the aggregate amount of $22,099,233, or approximately $10.43 per share, to redeeming stockholders. The Company agreed to deposit, or cause to be deposited on its behalf, into the Trust Account $0.02 for each public share outstanding for each 30-day extension period utilized through August 22, 2019. In connection with this extension, the Company deposited an aggregate of $286,814 into the Trust Account, of which $280,000 was contributed to the Trust Account by a third party and is not required to be repaid by the Company. Accordingly, the Company has recorded this amount as a credit to additional paid in capital in the accompanying statements of stockholders' equity. In order to pay for part of the third extension payment, the Company issued an unsecured promissory note (the "Second Note") in favor of BRAC, in the original principal amount of $6,814 (see Note 7).

On August 21, 2019, the Company stockholders approved an amendment to the Company's Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Extension") from August 22, 2019 to November 22, 2019. The number of shares of common stock presented for redemption in connection with the Extension was 846,888. The Company paid cash in the aggregate amount of $8,891,378, or approximately $10.50 per share, to redeeming stockholders. The Company agreed to deposit, or cause to be deposited on its behalf, into the Trust Account $0.02 for each public share outstanding for each 30-day extension period utilized through the Extension. In connection with this extension, the Company deposited an aggregate of $236,000 into the Trust Account to fund this extension payment, which amount was loaned to the Company by AZ Property Partners, LLC ("AZ Property Partners"), an entity majority owned and controlled by Richard Ackerman, the Company's Chairman, President and Chief Executive Officer, and BRAC (see Note 7).

On November 21, 2019, the Company's stockholders approved an amendment to the Company's Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Second Extension") from November 22, 2019 to March 23, 2020. The number of shares of common stock presented for redemption in connection with the Second Extension was 919,091. The Company paid cash in the aggregate amount of $9,736,077, or approximately $10.59 per share, to redeeming stockholders. The Company agreed to deposit, or cause to be deposited on its behalf, into the Trust Account $0.02 for each public share outstanding for each 30-day extension period utilized through the Second Extension. In connection with this extension, the Company deposited an aggregate of $60,285 into the Trust Account to fund the first thirty-day extension through December 22, 2019, which amount was loaned to the Company by AZ Property Partners and BRAC (see Note 7). In January and February 2020, AZ Property Partners and BRAC loaned the Company an additional aggregate amount of $90,427 each to pay for the extension through March 23, 2020, which was deposited into the Trust Account.

On March 23, 2020, the Company's stockholders approved an amendment to the Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Third Extension") from March 23, 2020 to July 23, 2020. The number of shares of common stock presented for redemption in connection with the Third Extension was 2,433,721. The Company paid cash in the aggregate amount of $25,997,965, or approximately $10.68 per share, to redeeming stockholders. The Company agreed to deposit, or cause to be deposited on its behalf, into the Trust Account $0.02 for each public share outstanding for each 30-day extension period utilized through the Third Extension. Notwithstanding the foregoing, if the volume weighted average price of the Company's common stock during the 10-day trading period ending on the 3rd day prior to the end of any applicable monthly period was equal to or greater than

$11.00 and the trading volume during the 10-day trading period exceeded 100,000 shares, the obligation to make any particular deposit would terminate with respect to the immediately following monthly period (but not with respect to any other future monthly period). In connection with this extension, the Company deposited an aggregate of $34,858 into the Trust Account to fund the extension through July 23, 2020, of which $17,429 was loaned to the Company by each of AZ Property Partners and BRAC.

On July 23, 2020, the Company's stockholders approved an amendment to the Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Fourth Extension") from July 23, 2020 to December 23, 2020. The number of shares of common stock presented for redemption in connection with the Fourth Extension was 27,786. The Company paid cash in amount of $299,253, or approximately $10.77 per share, to redeeming stockholders. The Company agreed to deposit, or cause to be deposited on its behalf, into the Trust Account $0.02 for each public share outstanding for each 30-day extension period utilized through the Fourth Extension. In connection with this extension, as of November 13, 2020, the Company deposited an aggregate of $44,219 into the Trust Account, of which $22,110 was deposited as of September 30, 2020, to fund the extension through November 23, 2020, which amounts were loaned to the Company by AZ Property Partners and BRAC. Notwithstanding the foregoing, if the volume weighted average price of the Company's common stock during the 10-day trading period ending on the 3rd day prior to the end of any applicable monthly period is equal to or greater than $11.00 and the trading volume during the 10-day trading period exceeds 100,000 shares, the obligation to make any particular deposit would terminate with respect to the immediately following monthly period (but not with respect to any other future monthly period).

On December 18, 2020, the Company held a special meeting pursuant to which the Company's stockholders approved an amendment to the Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Fifth Extension") from December 23, 2020 to April 23, 2021 (the "Extended Date"). In connection with this extension, no stockholders elected to redeem their shares of common stock.

If the Company is unable to complete a Business Combination by the Extended Date, the Company will (i) cease all operations except for the purpose of winding up, (ii) as promptly as reasonably possible but no more than ten business days thereafter, redeem 100% of the outstanding Public Shares, at a per share price, payable in cash, equal to the aggregate amount then on deposit in the Trust Account, including interest earned (net of taxes payable), divided by the number of then outstanding Public Shares, which redemption will completely extinguish public stockholders' rights as stockholders (including the right to receive further liquidation distributions, if any), subject to applicable law, and (iii) as promptly as reasonably possible following such redemption, subject to the approval of the remaining stockholders and the Company's board of directors, proceed to commence a voluntary liquidation and thereby a formal dissolution of the Company, subject in each case to its obligations to provide for claims of creditors and the requirements of applicable law. In the event of such distribution, it is possible that the per share value of the assets remaining available for distribution (including Trust Account assets) will be less than the $10.00 per Unit in the Initial Public Offering.

The Initial Stockholders have agreed to (i) waive their redemption rights with respect to Founder Shares, Placement Shares and any Public Shares they may acquire during or after the Initial Public Offering in connection with the consummation of a Business Combination, (ii) to waive their rights to liquidating distributions from the Trust Account with respect to their Founder's Shares and Placement Shares if the Company fails to consummate a Business Combination by the Extended Date and (iii) not to propose an amendment to the Company's Amended and Restated Certificate of Incorporation that would affect the substance or timing of the Company's obligation to redeem 100% of its Public Shares if the Company does not complete a Business Combination, unless the Company provides the public stockholders with the opportunity to redeem their Public Shares in conjunction with any such amendment. However, the Initial Stockholders will be entitled to liquidating distributions with respect to any Public Shares acquired if the Company fails to consummate a Business Combination or liquidates by Extended Date.

In order to protect the amounts held in the Trust Account, A/Z Property Partners, has agreed that it will be liable to ensure that the proceeds in the Trust Account are not reduced below $10.00 per share by the claims of target businesses or claims of vendors or other entities that are owed money by the Company for services rendered or contracted for or products sold to the Company. Additionally, the agreement entered into by AZ Property Partners specifically provides for two exceptions to the indemnity it has given: it will have no liability (1) as to any claimed amounts owed to a target business or vendor or other entity who has executed an agreement with the Company waiving any right, title, interest or claim of any kind they may have in or to any monies held in the Trust Account, or (2) as to any claims for indemnification by the underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended (the "Securities Act"). The Company will seek to reduce the possibility that AZ Property Partners will have to indemnify the Trust Account due to claims of creditors by endeavoring to have all vendors, service providers, prospective target businesses or other entities with which the Company does business, execute agreements with the Company waiving any right, title, interest or claim of any kind in or to monies held in the Trust Account.

NASDAQ Notifications

On January 7, 2019, the Company received a notice from the staff of the Listing Qualifications Department of Nasdaq (the "Staff") stating that the Company was no longer in compliance with Nasdaq Listing Rule 5620(a) for continued listing due to its failure to hold an annual meeting of stockholders within twelve months of the end of the Company's fiscal year ended December 31, 2017. The Company submitted a plan of compliance with Nasdaq and Nasdaq granted the Company an extension until May 22, 2019 to regain compliance with the rule by holding an annual meeting of stockholders. The Company held its annual meeting of stockholders on May 21, 2019 and, accordingly, the Staff determined that the Company was in compliance with Nasdaq Listing Rule 5620(a) for continued listing and the matter was closed.

On August 9, 2019, the Company received a notice from the Staff stating that the Company was no longer in compliance with Nasdaq Listing Rule 5550(a)(3) for continued listing due to its failure to maintain a minimum of 300 public holders (the "Rule"). The Company had until September 23, 2019 to provide Nasdaq with a specific plan to achieve and sustain compliance with the listing requirement. The notice is a notification of deficiency, not of imminent delisting, and had no current effect on the listing or trading of the Company's securities on Nasdaq.

On September 23, 2019 and October 28, 2019, the Company submitted a plan to regain compliance with Nasdaq and requested an extension through February 5, 2020. On October 28, 2019, Nasdaq requested additional information regarding the Company's compliance plan, to which the Company responded on November 8, 2019. On February 11, 2020, the Company received a notice from the Staff stating that, based upon the Company's non-compliance with the Rule, the Staff had determined to delist the Company's common stock from Nasdaq unless the Company timely requests a hearing before the Nasdaq Hearings Panel (the "Panel"). The Company was also notified that as a result of Nasdaq's determination to delist the Company's common stock, the Company's warrants and rights no longer comply with Nasdaq Listing Rule 5560(a), which requires the underlying securities of such exercisable securities to remain listed on Nasdaq, and the Company's Units no longer comply with Nasdaq Listing Rule 5225(b)(1)(A), which requires all component parts of units to meet the requirements for initial and continued listing, and the Company's units, warrants and rights are now subject to delisting. The Company requested a hearing, which request automatically stayed any further action by the Staff pending the ultimate conclusion of the hearing process.

On March 25, 2020, the Company received formal notice from Nasdaq indicating that the Staff had granted the Company's request for continued listing on Nasdaq. The decision followed the Company's hearing before the Panel, which took place on March 19, 2020. The Company's continued listing is subject to the Company's satisfaction of a number of conditions, including, ultimately, completion of a Business Combination with an operating company by no later than August 10, 2020, and the combined entity's compliance with all applicable criteria for initial listing on Nasdaq at the time of the merger. The Company failed to meet certain of the conditions contained in the extension grant and has submitted a modified extension request to the Staff.

On August 10, 2020, the Company submitted a letter to Nasdaq indicating that it was in compliance with the Rule as of July 31, 2020 and, as a result, satisfies the minimum 300 public holder requirement and all other applicable criteria for continued listing on Nasdaq. Accordingly, the Company requested that the Staff render a formal determination to continue the listing of the Company's securities. On August 11, 2020, the Company received a formal notice from Nasdaq notifying the Company that it regained compliance with the minimum 300 public holder requirements under Nasdaq rules and that the Panel had determined to continue the listing of the Company's securities on Nasdaq and close the matter.

On November 23, 2020, the Company received a notice from Nasdaq stating that, as of November 20, 2020, the Company was not in compliance with Listing Rule IM-5101-2 (the "Rule"), which requires that a special purpose acquisition company complete one or more business combinations within 36 months of the effectiveness of the registration statement filed in connection with its initial public offering. Since the Company's registration statement became effective on November 20, 2017, it was required to complete an initial business combination by no later than November 20, 2020. The Rule also provides that failure to comply with this requirement will result in the Listing Qualifications Department issuing a Staff Delisting Determination under Rule 5810 to delist the Company's securities.

Liquidity

As of December 31, 2020, the Company had $466 in its operating bank account, $5,967,947 in cash and marketable securities held in the Trust Account to be used for a Business Combination or to repurchase or convert stock in connection therewith and an adjusted working capital deficit of $609,509, which excludes prepaid income taxes of $51,642 and prepaid franchise taxes of $30,350, which have been paid from amounts in the Trust Account. As of December 31, 2020, approximately $138,764 of the amount on deposit in the Trust Account represented interest income, which is available to pay the Company's tax obligations. To date, the Company has withdrawn $716,788 of interest from the Trust Account in order to pay the Company's franchise and income taxes, of which $161,430 was withdrawn during the year ended December 31, 2020.

On November 17, 2018, the Company entered into an agreement (the "Agreement") with the Sponsor and BRAC, pursuant to which the Sponsor agreed to be responsible for all liabilities of the Company as of November 17, 2018 and to loan the Company the funds necessary to pay the expenses of the Company other than Business Combination expenses through the closing of a Business Combination when and as needed. If a Business Combination is not consummated, all outstanding loans made by the Sponsor will be forgiven (see Note 7). In addition, BRAC agreed to loan the Company all funds necessary to pay expenses incurred in connection with and in order to consummate a business combination (the "Business Combination Expenses") and such loans will be added to the Initial Notes (as defined in Note 7). If the Company does not consummate a Business Combination, all outstanding loans under the Notes will be forgiven, except to the extent of any funds held outside of the Trust Account after paying all other fees and expenses of the Company incurred prior to the date of such failure to consummate a Business Combination (see Note 7).

The Company may raise additional capital through loans or additional investments from the Sponsor or its stockholders, officers, directors, or third parties. Other than as described above, the Company's officers and directors and the Sponsor may, but are not obligated to, loan the Company funds, from time to time, in whatever amount they deem reasonable in their sole discretion, to meet the Company's working capital needs.

The Company does not believe it will need to raise additional funds in order to meet expenditures required for operating its business. Neither the Sponsor, nor any of the stockholders, officers or directors, or third parties are under any obligation to advance funds to, or invest in, the Company, except as discussed above. Accordingly, the Company may not be able to obtain additional financing. If the Company is unable to raise additional capital, it may be required to take additional measures to conserve liquidity, which could include, but not necessarily be limited to suspending the pursuit of a potential transaction. The Company cannot provide any assurance that new financing will be available to it on commercially acceptable terms, if at all. Even if the Company can obtain

sufficient financing or raise additional capital, it only has until April 23, 2021 (or as may be extended) to consummate a Business Combination. There is no assurance that the Company will be able to do so prior to April 23, 2021, or as may be extended by shareholder vote.

Risks and Uncertainties

Management continues to evaluate the impact of the COVID-19 pandemic and has concluded that while it is reasonably possible that the virus could have a negative effect on the Company's financial position, results of its operations and/or search for a target company, the specific impact is not readily determinable as of the date of these consolidated financial statements. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

NOTE 2 — RESTATEMENT OF PREVIOUSLY ISSUED FINANCIAL STATEMENTS

The Company previously accounted for its outstanding Public Warrants and Private Placement Warrants issued in connection with its Initial Public Offering as components of equity instead of as derivative liabilities.

In connection with the audit of the Company's financial statements for the period ended December 31, 2020, the Company's management further evaluated the warrants under Accounting Standards Codification ("ASC") Subtopic 815-40, Contracts in Entity's Own Equity. ASC Section 815-40-15 addresses equity versus liability treatment and classification of equity-linked financial instruments, including warrants, and states that a warrant may be classified as a component of equity only if, among other things, the warrant is indexed to the issuer's common stock. Under ASC Section 815-40-15, a warrant is not indexed to the issuer's common stock if the terms of the warrant require an adjustment to the exercise price upon a specified event and that event is not an input to the fair value of the warrant. Based on management's evaluation, the Company's audit committee, in consultation with management and after discussion with the Company's independent registered public accounting firm, concluded that the Company's Private Placement Warrants are not indexed to the Company's common shares in the manner contemplated by ASC Section 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.

As a result of the above, the Company should have classified the Private Placement Warrants as derivative liabilities in its previously issued financial statements. Under this accounting treatment, the Company is required to measure the fair value of the warrants at the end of each reporting period and recognize changes in the fair value from the prior period in the Company's operating results for the current period. (See Notes 3 and 10).

The Company's accounting for the Private Placement Warrants as components of equity instead of as derivative liabilities did not have any effect on the Company's previously reported operating expenses, cash flows or cash.

	As Previously Reported	Adjustment	As Restated
Balance Sheet as of December 31, 2020 (audited)			
Warrant liability	$ —	$ 655,098	$ 655,098
Total liabilities	3,281,546	655,098	3,936,644
(Accumulated deficit)/retained earnings	(64,917)	(655,098)	(720,015)
Total stockholders' equity	2,768,859	(655,098)	2,113,761
Statement of Operations for the Year Ended December 31, 2020 (audited)			
Change in fair value of warrant liability	$ —	$ (655,098)	$ (655,098)
Other income, net	490,835	(655,098)	(164,263)
(Loss) income before provision for income taxes	(416,571)	(655,098)	(1,071,669)
Net (loss) income	(434,412)	(655,098)	(1,089,510)
Basic and diluted net loss per common share, Non-redeemable common stock	(0.16)	(0. 24)	(0. 40)
Statement of Cash Flows for the Year Ended December 31, 2020 (audited)			
Cash flow from operating activities:			
Net loss	$ (434,412)	$ (655,098)	$ (1,089,510)
Adjustments to reconcile net loss to net cash and used in operating activities:			
Change in fair value of warrant liability	—	655,098	655,098

NOTE 3 — SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The accompanying consolidated financial statements are presented in conformity with accounting principles generally accepted in the United States of America ("GAAP") and pursuant to the rules and regulations of the SEC.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its majority owned subsidiary where the Company has the ability to exercise control. All significant intercompany balances and transactions have been eliminated in consolidation. Activities in relation to the noncontrolling interest are not considered to be significant and are, therefore, not presented in the accompanying consolidated financial statements.

Emerging Growth Company

The Company is an "emerging growth company," as defined in Section 2(a) of the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and it may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

Further, Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period which means that when a standard is issued or revised and it has different application dates for public or private companies, the Company, as an emerging growth company, will adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of the Company's consolidated financial statements with another public company which is neither an emerging growth company nor an emerging growth company which has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period.

Making estimates requires management to exercise significant judgment. It is at least reasonably possible that the estimate of the effect of a condition, situation or set of circumstances that existed at the date of the financial statements, which management considered in formulating its estimate, could change in the near term due to one or more future confirming events. Accordingly, the actual results could differ significantly from the Company's estimates.

Cash and Cash Equivalents

The Company considers all short-term investments with an original maturity of three months or less when purchased to be cash equivalents. The Company did not have any cash equivalents as of December 31, 2020 and 2019.

Cash and Marketable Securities Held in Trust Account

At December 31, 2020 and 2019, the assets held in the Trust Account were held in money market funds, which are invested in U.S. Treasury securities. Through December 31, 2020, the Company has withdrawn $716,788 of interest from the Trust Account in order to pay its franchise and income taxes, of which $161,430 was withdrawn during the year ended December 31, 2020.

Warrant Liabilities

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 Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") 480, Distinguishing Liabilities from Equity ("ASC 480") and ASC 815, Derivatives and Hedging ("ASC 815"). The assessment considers whether the warrants are freestanding financial instruments pursuant to ASC 480, meet the definition of a liability pursuant to ASC 480, and whether the warrants meet all of the requirements for equity classification under ASC 815, including whether the warrants are indexed to the Company's own common shares and whether the warrant holders could potentially require "net cash settlement" in a circumstance outside of the Company's control, among other conditions for equity classification. This assessment, which requires the use of professional judgment, is conducted at the time of warrant issuance and as of each subsequent quarterly period end date while the warrants are outstanding.

For issued or modified warrants that meet all of the criteria for equity classification, the warrants are required to be recorded as a component of additional paid-in capital at the time of issuance. For issued or modified warrants that do not meet all the criteria for equity classification, the warrants are required to be recorded at their initial fair value on the date of issuance, and each balance sheet date thereafter. Changes in the estimated fair value of the warrants are recognized as a non-cash gain or loss on the statements of operations. The fair value of the Private Placement Warrants was estimated using a Black-Scholes valuation approach (see Note 12).

Fair Value of Financial Instruments

The Company applies ASC 820, *Fair Value Measurement* ("ASC 820"), which establishes framework for measuring fair value and clarifies the definition of fair value within that framework. ASC 820 defines fair value as an exit price, which is the price that would be received for an asset or paid to transfer a liability in the Company's principal or most advantageous market in an orderly transaction between market participants on the measurement date. The fair value hierarchy established in ASC 820 generally requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Observable inputs reflect the assumptions that market participants would use in pricing the asset or liability and are developed based on market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the entity's own assumptions based on market data and the entity's judgments about the assumptions that market participants would use in pricing the asset or liability and are to be developed based on the best information available in the circumstances.

The valuation hierarchy is composed of three levels. The classification within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement. The levels within the valuation hierarchy are described below:

Level 1 - Assets and liabilities with unadjusted, quoted prices listed on active market exchanges. Inputs to the fair value measurement are observable inputs, such as quoted prices in active markets for identical assets or liabilities.

Level 2 - Inputs to the fair value measurement are determined using prices for recently traded assets and liabilities with similar underlying terms, as well as direct or indirect observable inputs, such as interest rates and yield curves that are observable at commonly quoted intervals.

Level 3 - Inputs to the fair value measurement are unobservable inputs, such as estimates, assumptions, and valuation techniques when little or no market data exists for the assets or liabilities.

The fair value of the Company's assets and liabilities, which qualify as financial instruments under ASC Topic 820, "Fair Value Measurement," approximates the carrying amounts represented in the accompanying consolidated balance sheets, primarily due to their short-term nature.

See Note 12 for additional information on assets and liabilities measured at fair value.

Common Stock Subject to Possible Redemption

The Company accounts for its common stock subject to possible redemption in accordance with the guidance in Accounting Standards Codification ("ASC") Topic 480 "Distinguishing Liabilities from Equity." Common stock subject to mandatory redemption is classified as a liability instrument and is measured at fair value. Conditionally redeemable common stock (including common stock that features redemption rights that are either within the control of the holder or subject to redemption upon the occurrence of uncertain events not solely within the Company's control) is classified as temporary equity. At all other times, common stock is classified as stockholders' equity. The Company's common stock features certain redemption rights that are considered to be

outside of the Company's control and subject to occurrence of uncertain future events. Accordingly, common stock subject to possible redemption is presented at redemption value as temporary equity, outside of the stockholders' equity section of the Company's balance sheets. At December 31, 2020, there are no shares of common stock subject to possible redemption.

Income Taxes

The Company complies with the accounting and reporting requirements of ASC Topic 740 "Income Taxes," which requires an asset and liability approach to financial accounting and reporting for income taxes. Deferred income tax assets and liabilities are computed for differences between the financial statement and tax bases of assets and liabilities that will result in future taxable or deductible amounts, based on enacted tax laws and rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized.

ASC Topic 740 prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more-likely-than-not to be sustained upon examination by taxing authorities. The Company recognizes accrued interest and penalties related to unrecognized tax benefits as income tax expense. As of December 31, 2020 and 2019, there were no unrecognized tax benefits and no amounts accrued for interest and penalties. The Company is currently not aware of any issues under review that could result in significant payments, accruals or material deviation from its position.

The Company may be subject to potential examination by federal, state and city taxing authorities in the areas of income taxes. These potential examinations may include questioning the timing and amount of deductions, the nexus of income among various tax jurisdictions and compliance with federal, state and city tax laws. The Company's management does not expect that the total amount of unrecognized tax benefits will materially change over the next twelve months.

On March 27, 2020, the CARES Act was enacted in response toCOVID-19 pandemic. Under ASC 740, the effects of changes in tax rates and laws are recognized in the period which the new legislation is enacted. The CARES Act made various tax law changes including among other things (i) increasing the limitation under Section 163(j) of the Internal Revenue Code of 1986, as amended (the "IRC") for 2019 and 2020 to permit additional expensing of interest (ii) enacting a technical correction so that qualified improvement property can be immediately expensed under IRC Section 168(k), (iii) making modifications to the federal net operating loss rules including permitting federal net operating losses incurred in 2018, 2019, and 2020 to be carried back to the five preceding taxable years in order to generate a refund of previously paid income taxes and (iv) enhancing the recoverability of alternative minimum tax credits. Given the Company's full valuation allowance position, the CARES Act did not have an impact on the financial statements.

Net Income (Loss) Per Common Share

Net income (loss) per share is computed by dividing net income by the weighted-average number of shares of common stock outstanding during the period, excluding shares of common stock subject to forfeiture. The Company has not considered the effect of (1) warrants sold in the Initial Public Offering and private placement to purchase 3,586,250 shares of common stock, (2) rights sold in the Initial Public Offering and private placement that convert into 717,250 shares of common stock and (3) 600,000 shares of common stock, warrants to purchase 300,000 shares of common stock and rights that convert into 60,000 shares of common stock in the unit purchase option sold to the underwriter, in the calculation of diluted (loss) income per share, since the exercise of the warrants are contingent upon the occurrence of future events and the inclusion of such warrants would be anti-dilutive.

The Company's consolidated statements of operations include a presentation of income (loss) per share for common shares subject to possible redemption in a manner similar to the two-class method of income (loss) per

share. Net income (loss) per common share, basic and diluted, for Common stock subject to possible redemption is calculated by dividing the proportionate share of income or loss on marketable securities held by the Trust Account, net of applicable franchise and income taxes, by the weighted average number of shares of Common stock subject to possible redemption outstanding since original issuance.

Net income (loss) per share, basic and diluted, for non-redeemable common stock is calculated by dividing the net income (loss), adjusted for income or loss on marketable securities attributable to Common stock subject to possible redemption, by the weighted average number of non-redeemable common stock outstanding for the period.

Non-redeemable common stock includes Founder Shares and non-redeemable shares of common stock as these shares do not have any redemption features. Non-redeemable common stock participates in the income or loss on marketable securities based on non-redeemable shares' proportionate interest.

The following table reflects the calculation of basic and diluted net income (loss) per common share (in dollars, except per share amounts):

	Year Ended December 31, 2020	2019
Common stock subject to possible redemption		
Numerator: Earnings allocable to Common stock subject to possible redemption		
Interest earned on marketable securities held in Trust Account	$ —	$ 922,211
Less: interest available to be withdrawn for payment of taxes	—	(218,317)
Net income attributable	**$ —**	**$ 703,894**
Denominator: Weighted Average Common stock subject to possible redemption		
Basic and diluted weighted average shares outstanding, Common stock subject to possible redemption	**546,586**	**4,555,229**
Basic and diluted net income per share, Common stock subject to possible redemption	**$ 0.00**	**$ 0.15**
Non-Redeemable Common Stock		
Numerator: Net Loss minus Net Earnings		
Net loss	$ (1,089,510)	$ (1,594)
Net income allocable to Common stock subject to possible redemption	—	—
Non-Redeemable Net Loss	**$ (1,089,510)**	**$ (1,594)**
Denominator: Weighted Average Non-redeemable common stock		
Basic and diluted weighted average shares outstanding, Non-redeemable common stock	**2,736,258**	**2,783,021**
Basic and diluted net loss per share, Non-redeemable common stock	**$ (0.40)**	**$ (0.11)**

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist of a cash account in a financial institution which, at times may exceed the Federal depository insurance coverage limit of $250,000. The Company has not experienced losses on this account and management believes the Company is not exposed to significant risks on such account.

Derivative Financial Instruments

The Company evaluates its financial instruments to determine if such instruments are derivatives or contain features that qualify as embedded derivatives in accordance with ASC Topic 815, "Derivatives and Hedging". For derivative financial instruments that are accounted for as liabilities, the derivative instrument is initially

recorded at its fair value on the grant date and is then re-valued at each reporting date, with changes in the fair value reported in the statements of operations. The classification of derivative instruments, including whether such instruments should be recorded as liabilities or as equity, is evaluated at the end of each reporting period. Derivative liabilities are classified in the balance sheet as current or non-current based on whether or not net-cash settlement or conversion of the instrument could be required within 12 months of the balance sheet date.

Recently Issued Accounting Standards

Management does not believe that any recently issued, but not yet effective, accounting standards, if currently adopted, would have a material effect on the Company's consolidated financial statements.

4. INITIAL PUBLIC OFFERING

Pursuant to the Initial Public Offering, the Company sold 6,900,000 Units at a purchase price of $10.00 per Unit, which includes the full exercise by the underwriters of their over-allotment option of 900,000 Units at $10.00 per Unit. Each Unit consists of one share of common stock, one Public Right and one Public Warrant. Each Public Right will convert into one-tenth (1/10) of one share of common stock upon consummation of a Business Combination (see Note 9). Each whole Public Warrant entitles the holder to purchase one share of common stock at an exercise price of $11.50 per whole share (see Note 9).

5. PRIVATE PLACEMENT

Simultaneously with the Initial Public Offering, the Sponsor purchased 250,000 Private Placement Units, at $10.00 per Private Placement Unit, for an aggregate purchase price of $2,500,000. On November 29, 2017, the Company consummated the sale of an additional 22,500 Private Placement Units at a price of $10.00 per unit, which were purchased by the Sponsor, generating gross proceeds of $225,000. Each Private Placement Unit consists of one share of common stock ("Placement Share"), one right ("Placement Right") and one-half of one warrant (each, a "Placement Warrant"), each whole Placement Warrant exercisable to purchase one share of common stock at an exercise price of $11.50. The proceeds from the Private Placement Units were added to the proceeds from the Initial Public Offering held in the Trust Account. If the Company does not complete a Business Combination within the Combination Period, the proceeds from the sale of the Private Placement Units will be used to fund the redemption of the Public Shares (subject to the requirements of applicable law), and the Placement Rights and the Placement Warrants will expire worthless.

The Private Placement Units are identical to the Units sold in the Initial Public Offering except that the Placement Warrants (i) are not redeemable by the Company and (ii) may be exercised for cash or on a cashless basis, so long as they are held by the initial purchaser or any of its permitted transferees. In addition, the Private Placement Units and their component securities may not be transferable, assignable or salable until after the consummation of a Business Combination, subject to certain limited exceptions. If the Placement Warrants are held by someone other than the initial purchasers or their permitted transferees, the Placement Warrants will be redeemable by the Company and exercisable by such holders on the same basis as the Public Warrants.

6. RELATED PARTY TRANSACTIONS

Founder Shares

In September 2017, the Company issued an aggregate of 1,437,500 shares of common stock to the Sponsor (the "Founder Shares") for an aggregate purchase price of $25,000. On November 20, 2017, the Company effectuated a 1.2-for-1 stock dividend of its common stock resulting in an aggregate of 1,725,000 Founder Shares outstanding. The Founder Shares included an aggregate of up to 225,000 shares subject to forfeiture by the Sponsor to the extent that the underwriters' over-allotment was not exercised in full or in part, so that the Initial Stockholders would own 20% of the Company's issued and outstanding shares after the Initial Public Offering

(excluding the Private Placement Units and the Representative Shares (as defined in Note 9)). As a result of the underwriters' election to fully exercise their over-allotment option, 225,000 Founder Shares are no longer subject to forfeiture.

The Initial Stockholders have agreed not to transfer, assign or sell any of the Founder's Shares until the earlier of (i) one year after the date of the consummation of a Business Combination, or (ii) with respect to 50% of the Founder Shares, the date on which the closing price of the Company's common stock equals or exceeds $12.50 per share (as adjusted for stock splits, stock dividends, reorganizations and recapitalizations) for any 20 trading days within any 30-trading day period commencing after a Business Combination, or earlier, in each case, if subsequent to a Business Combination, the Company consummates a subsequent liquidation, merger, stock exchange, reorganization or other similar transaction which results in all of the Company's stockholders having the right to exchange their common stock for cash, securities or other property.

Related Party Loans

In order to finance transaction costs in connection with a Business Combination, the Sponsor, an affiliate of the Sponsor, or the Company's officers and directors may, but are not obligated to, loan the Company funds from time to time or at any time, as may be required ("Working Capital Loans"). Each Working Capital Loan would be evidenced by a promissory note. The Working Capital Loans would either be paid upon consummation of a Business Combination, without interest, or, at the holder's discretion, up to $1,500,000 of the Working Capital Loans may be converted into units at a price of $10.00 per unit. The units would be identical to the Private Placement Units. In the event that a Business Combination does not close, the loans will be forgiven. There were no outstanding Working Capital Loans at December 31, 2020 and 2019.

7. EXTENSION FUNDING AGREEMENT AND PROMISSORY NOTES

On November 17, 2018, the Company entered into an Extension Funding Agreement with the Sponsor and BRAC. Pursuant to the Extension Funding Agreement, the Sponsor transferred an aggregate of 1,500,000 Founders Shares to BRAC in exchange for the agreements set forth below and aggregate cash consideration of $1.00.

Pursuant to the Extension Funding Agreement, the Sponsor agreed to extend the period of time the Company has to consummate a Business Combination up to two times for an aggregate of up to six months and BRAC agreed to loan the Company the funds necessary to obtain the extensions (the "Extensions"). On November 20, 2018 and February 21, 2019, the Company issued unsecured promissory notes (the "Initial Notes") in favor of BRAC, in the original principal amount of $690,000 each (or an aggregate of $1,380,000), to provide the Company the funds necessary to obtain an aggregate of six-months of Extensions. Pursuant to the Extension Funding Agreement, BRAC has also agreed to loan the Company all funds necessary to pay expenses incurred in connection with and in order to consummate a Business Combination (the "Business Combination Expenses") and such loans will be added to the Initial Notes.

In connection with the stockholders' approval of the extended date of August 22, 2019, the Company issued another unsecured promissory note (the "Second Note") in favor of BRAC in order to pay for part of the third extension payment in the original principal amount of $6,814.

On December 31, 2019, the Company issued an unsecured promissory note, as amended on March 31, 2020, June 30,2020 and September 30, 2020, (the "Third Note" and, together with the Initial Notes and the Second Note, the "Extension Notes") in favor of BRAC in the aggregate principal amount of $317,547 in order to pay for part of the extension payments. Through December 31, 2020, BRAC loaned the Company an aggregate of $423,075, of which $141,299 was loaned during the year ended December 31, 2020 to pay for part of the extension payments through December 23, 2020 and $32,967 was loaned during the year ended December 31, 2020 to pay for extension related costs and $100,000 was loaned during the year ended December 31, 2020 for working capital purposes.

If the Company does not consummate a Business Combination, all outstanding loans under the Extension Notes will be forgiven, except to the extent of any funds held outside of the Trust Account after paying all other fees and expenses of the Company incurred prior to the date of such failure to consummate a Business Combination.

As of December 31, 2020, the outstanding balance under the Extension Notes amounted to an aggregate of approximately $1,809,889.

The Sponsor has agreed to be responsible for all liabilities of the Company effective November 17, 2018, except for liabilities associated with the possible redemption of shares by the Company's shareholders, as described in the Company's Amended and Restated Certificate of Incorporation. The Sponsor has also agreed to loan the Company the funds necessary to pay the expenses of the Company other than the Business Combination Expenses through the closing of a Business Combination when and as needed in order for the Company to continue in operation (the "Non-Business Combination Related Expenses"). Upon consummation of a Business Combination, up to $200,000 of the Non-Business Combination Related Expenses will be repaid by the Company to the Sponsor provided that the Company has funds available to it sufficient to repay such expenses (the "Cap") as well as to pay for all stockholder redemptions, all Business Combination Expenses, repayment of the Extension Notes, and any funds necessary for the working capital requirements of the Company following closing of the Business Combination. Any remaining amounts in excess of the Cap will be forgiven. On December 31, 2019, the Company issued an unsecured promissory note to the Sponsor, as amended on March 31, 2020, June 30, 2020 and September 30, 2020, in the principal amount of approximately $862,148 to pay for Non-Business Combination Related Expenses incurred through December 31, 2020 and expenses incurred thereafter. If the Company does not consummate a Business Combination, all outstanding loans made by the Sponsor to cover the Non-Business Combination Related Expenses will be forgiven, except as set forth above. The Company repaid $35,000 of such loans during the year ended December 31, 2020.

Through December 31, 2020, AZ Property Partners loaned the Company an aggregate of $862,148, of which $141,299 was loaned during the year ended December 31, 2020 to pay for part of the extension payments through December 23, 2020 and $339,708 was loaned during the year ended December 31, 2020 to pay for Non-Business Combination Related Expenses.

As of December 31, 2020, the outstanding balance under promissory note with AZ Property Partners amounted to $862,148.

8. COMMITMENTS AND CONTINGENCIES

Forgiveness of Debt

During the year ended December 31, 2020, one of the Company's service providers forgave certain amounts due to them in connection with previously provided services. As a result, the Company recorded a forgiveness of debt in the amount of $352,071.

Registration Rights

Pursuant to a registration rights agreement entered into on November 20, 2017, the holders of the Company's common stock prior to the Initial Public Offering (the "Founder Shares"), Private Placement Units (and their underlying securities), the shares issued to EarlyBirdCapital at the closing of the Initial Public Offering (the "Representative Shares") and any Units that may be issued upon conversion of the working capital loans (and their underlying securities) are entitled to registration rights. The holders of a majority of these securities are entitled to make up to three demands, excluding short form demands, that the Company register such securities. The holders of the majority of the Founder's Shares can elect to exercise these registration rights at any time commencing three months prior to the date on which these shares of common stock are to be released from

escrow. The holders of a majority of the Private Placement Units or Units issued to the Sponsor, officers, directors or their affiliates in payment of working capital loans made to the Company (in each case, including the underlying securities) can elect to exercise these registration rights at any time after the Company consummates a Business Combination. In addition, the holders will have certain "piggy-back" registration rights with respect to registration statements filed subsequent to the completion of a Business Combination and rights to require the Company to register for resale such securities pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"). Notwithstanding anything to the contrary, EarlyBirdCapital and its designees may participate in a "piggy-back" registration during the seven-year period beginning on the effective date of the registration statement. However, the registration rights agreement will provide that the Company will not permit any registration statement filed under the Securities Act to become effective until termination of the applicable lock-up period. The Company will bear the expenses incurred in connection with the filing of any such registration statements.

Business Combination Marketing Agreement

The Company has engaged EarlyBirdCapital as an advisor in connection with a Business Combination to assist the Company in holding meetings with its stockholders to discuss a potential Business Combination and the target business' attributes, introduce the Company to potential investors that are interested in purchasing securities, assist the Company in obtaining stockholder approval for the Business Combination and assist the Company with its press releases and public filings in connection with a Business Combination. The Company will pay EarlyBirdCapital a cash fee for such services upon the consummation of a Business Combination in an amount equal to 4.0% of the gross proceeds of the Initial Public Offering (exclusive of any applicable finders' fees which might become payable). If a Business Combination is not consummated for any reason, no fee will be due or payable.

Merger Agreement

On December 13, 2020, the Company, NeuroRx and Merger Sub, entered into an Agreement and Plan of Merger ("Merger Agreement"). Pursuant to the Merger Agreement, Merger Sub will merge with and into NeuroRx, with NeuroRx surviving the merger ("Merger"). As a result of the Merger, and upon consummation of the Merger and the other transactions contemplated by the Merger Agreement ("Transactions"), NeuroRx will become a wholly-owned subsidiary of the Company, with the stockholders of NeuroRx becoming stockholders of the Company.

Pursuant to the Merger Agreement, the aggregate consideration payable to the stockholders of NeuroRx at the effective time of the Merger (the "Effective Time") will equal 50,000,000 shares ("Closing Consideration") of the Company's common stock, par value $0.001 per share ("Company Common Stock"), plus the additional contingent right to receive the Earnout Shares and Earnout Cash (each as defined below). At the Effective Time, each outstanding share of NeuroRx common stock (including shares of NeuroRx common stock resulting from the conversion of NeuroRx preferred stock immediately prior to the Effective Time) will be converted into the right to receive a pro rata portion of the Closing Consideration and the contingent right to receive a pro rata portion of the Earnout Shares and Earnout Cash. Each option and warrant of NeuroRx that is outstanding and unexercised immediately prior to the Effective Time will be assumed by the Company and will represent the right to acquire an adjusted number of shares of the Company Common Stock at an adjusted exercise price, in each case, pursuant to the terms of the Merger Agreement.

As part of the aggregate consideration payable to NeuroRx's securityholders pursuant to the terms of the Merger Agreement, NeuroRx's securityholders (including option holders and warrant holders) who own NeuroRx securities immediately prior to the closing of the Transactions will have the contingent right to receive their pro rata portion of (i) an aggregate of 25,000,000 shares of the Company Common Stock ("Earnout Shares") if, prior to December 31, 2022, the NeuroRx COVID-19 Drug receives emergency use authorization by the Food and Drug Administration ("FDA") and NeuroRx submits and the FDA files for review a new drug

application for the NeuroRx COVID-19 Drug (the occurrence of the foregoing, the "Earnout Shares Milestone"), and (ii) an aggregate of $100,000,000 in cash ("Earnout Cash") upon the earlier to occur of (x) FDA approval of the NeuroRx COVID-19 Drug and the listing of the NeuroRx COVID-19 Drug in the FDA's "Orange Book" and (y) FDA approval of the NeuroRx Antidepressant Drug Regimen and the listing of the NeuroRx Antidepressant Drug Regimen in the FDA's "Orange Book," in each case prior to December 31, 2022 (the occurrence of either of clauses (x) or (y), the "Earnout Cash Milestone").

The Merger Agreement contains customary representations, warranties and covenants by the parties thereto and the closing is subject to certain conditions as further described in the Merger Agreement.

9. STOCKHOLDERS' EQUITY

Preferred Stock — The Company is authorized to issue 1,000,000 shares of preferred stock with a par value of $0.001 per share with such designation, rights and preferences as may be determined from time to time by the Company's Board of Directors. At December 31, 2020 and 2019, there were no shares of preferred stock issued or outstanding.

Common Stock — The Company is authorized to issue 100,000,000 shares of common stock with a par value of $0.001 per share. Holders of the Company's common stock are entitled to one vote for each share. At December 31, 2020 and 2019, there were 2,688,242 and 2,844,414 shares of common stock issued and outstanding, respectively (excluding -0- and 2,305,335 shares of common stock subject to possible redemption, respectively).

Rights — Each holder of a right will receive one-tenth (1/10) of one share of common stock upon consummation of a Business Combination, even if the holder of such right redeemed all shares held by it in connection with a Business Combination. No fractional shares will be issued upon conversion of the rights. No additional consideration will be required to be paid by a holder of rights in order to receive its additional shares upon consummation of a Business Combination, as the consideration related thereto has been included in the Unit purchase price paid for by investors in the Initial Public Offering. If the Company enters into a definitive agreement for a Business Combination in which the Company will not be the surviving entity, the definitive agreement will provide for the holders of rights to receive the same per share consideration the holders of the common stock will receive in the transaction on an as-converted into common stock basis and each holder of a right will be required to affirmatively convert its rights in order to receive 1/10 share underlying each right (without paying additional consideration). The shares issuable upon conversion of the rights will be freely tradable (except to the extent held by affiliates of the Company).

If the Company is unable to complete a Business Combination within the Combination Period and the Company liquidates the funds held in the Trust Account, holders of rights will not receive any of such funds with respect to their rights, nor will they receive any distribution from the Company's assets held outside of the Trust Account with respect to such rights, and the rights will expire worthless. Further, there are no contractual penalties for failure to deliver securities to the holders of the rights upon consummation of a Business Combination. Additionally, in no event will the Company be required to net cash settle the rights. Accordingly, holders of the rights might not receive the shares of common stock underlying the rights.

Representative Shares

At the closing of the Initial Public Offering, the Company issued EarlyBirdCapital and its designees 120,000 Representative Shares. On November 29, 2017, the Company issued an additional 18,000 Representative Shares for no consideration. The Company accounted for the Representative Shares as an expense of the Initial Public Offering resulting in a charge directly to stockholders' equity. The Company determined the fair value of Representative Shares to be $1,380,000 based upon the offering price of the Units of $10.00 per Unit. The underwriter has agreed not to transfer, assign or sell any such shares until the completion of a Business

Combination. In addition, the underwriter and its designees have agreed (i) to waive their redemption rights with respect to such shares in connection with the completion of a Business Combination and (ii) to waive their rights to liquidating distributions from the Trust Account with respect to such shares if the Company fails to complete a Business Combination within the Combination Period.

Unit Purchase Option

On November 22, 2017, the Company sold to EarlyBirdCapital, for $100, an option to purchase up to 600,000 Units exercisable at $10.00 per Unit (or an aggregate exercise price of $6,000,000) commencing on the later of November 20, 2018 or the consummation of a Business Combination. The unit purchase option may be exercised for cash or on a cashless basis, at the holder's option, and expires five years from November 20, 2017. The Units issuable upon exercise of this option are identical to those offered in the Initial Public Offering. The Company accounted for the unit purchase option, inclusive of the receipt of $100 cash payment, as an expense of the Initial Public Offering resulting in a charge directly to stockholders' equity. The Company estimated the fair value of this unit purchase option to be $2,042,889 (or $3.40 per Unit) using the Black-Scholes option-pricing model. The fair value of the unit purchase option granted to the underwriters was estimated as of the date of grant using the following assumptions: (1) expected volatility of 35%, (2) risk-free interest rate of 2.05% and (3) expected life of five years. The option and such units purchased pursuant to the option, as well as the common stock underlying such units, the rights included in such units, the common stock that is issuable for the rights included in such units, the warrants included in such units, and the shares underlying such warrants, have been deemed compensation by FINRA and are therefore subject to a 180-day lock-up pursuant to Rule 5110(g)(1) of FINRA's NASDAQ Conduct Rules. Additionally, the option may not be sold, transferred, assigned, pledged or hypothecated for a one-year period (including the foregoing 180-day period) following the date of Initial Public Offering except to any underwriter and selected dealer participating in the Initial Public Offering and their bona fide officers or partners. The option grants to holders demand and "piggy back" rights for periods of five and seven years, respectively, from the effective date of the registration statement with respect to the registration under the Securities Act of the securities directly and indirectly issuable upon exercise of the option. The Company will bear all fees and expenses attendant to registering the securities, other than underwriting commissions which will be paid for by the holders themselves. The exercise price and number of units issuable upon exercise of the option may be adjusted in certain circumstances including in the event of a stock dividend, or the Company's recapitalization, reorganization, merger or consolidation. However, the option will not be adjusted for issuances of common stock at a price below its exercise price.

10. WARRANT LIABILITY

Warrants — Public Warrants may only be exercised for a whole number of shares. No fractional shares will be issued upon exercise of the Public Warrants. The Public Warrants will become exercisable on the later of the completion of a Business Combination and November 22, 2018; provided in that the Company has an effective registration statement under the Securities Act covering the shares of common stock issuable upon exercise of the Public Warrants and a current prospectus relating to them is available. The Company has agreed that as soon as practicable, the Company will use its best efforts to file with the SEC a registration statement for the registration, under the Securities Act, of the shares of common stock issuable upon exercise of the Public Warrants. The Company will use its best efforts to cause the same to become effective and to maintain the effectiveness of such registration statement, and a current prospectus relating thereto, until the expiration of the Public Warrants in accordance with the provisions of the warrant agreement. Notwithstanding the foregoing, if a registration statement covering the shares of common stock issuable upon exercise of the Public Warrants is not effective 90 days following the consummation of Business Combination, warrant holders may, until such time as there is an effective registration statement and during any period when the Company shall have failed to maintain an effective registration statement, exercise warrants on a cashless basis pursuant to the exemption provided by Section 3(a)(9) of the Securities Act, provided that such exemption is available. If that exemption, or another exemption, is not available, holders will not be able to exercise their warrants on a cashless basis. The Public Warrants will expire five years after the completion of a Business Combination or earlier upon redemption or liquidation.

The Company may redeem the Public Warrants:

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

If the Company calls the Public Warrants for redemption, management will have the option to require all holders that wish to exercise the Public Warrants to do so on a "cashless basis," as described in the warrant agreement.

The exercise price and number of shares of common stock issuable upon exercise of the warrants may be adjusted in certain circumstances including in the event of a stock dividend, or recapitalization, reorganization, merger or consolidation. However, the warrants will not be adjusted for issuance of common stock at a price below its exercise price. Additionally, in no event will the Company be required to net cash settle the warrants. If the Company is unable to complete a Business Combination within the Combination Period and the Company liquidates the funds held in the Trust Account, holders of warrants will not receive any of such funds with respect to their warrants, nor will they receive any distribution from the Company's assets held outside of the Trust Account with the respect to such warrants. Accordingly, the warrants may expire worthless.

11. INCOME TAX

The Company's net deferred tax assets are as follows:

	December 31,	
	2020	2019
Deferred tax assets		
Net operating loss carryforward	$ 105,559	$—
Unrealized gain on marketable securities	—	—
Total deferred tax assets	105,559	—
Valuation Allowance	(105,559)	—
Deferred tax assets, net valuation allowance	$ —	$—

The income tax provision consists of the following:

	As of December 31,	
	2020	2019
Federal		
Current	$ 17,841	$102,332
Deferred	(87,480)	2,936
State and Local		
Current	—	—
Deferred	(18,079)	—
Change in valuation allowance	105,559	(21,062)
Income tax provision	$ 17,841	$ 84,206

As of December 31, 2020 and 2019, the Company had $416,571 and $-0- of U.S. federal and state net operating loss carryovers available to offset future taxable income, respectively, which carryforward indefinitely.

In assessing the realization of the deferred tax assets, management considers whether it is more likely than not that some portion of all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which temporary differences representing net future deductible amounts become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in making this assessment. After consideration of all of the information available, management believes that significant uncertainty exists with respect to future realization of the deferred tax assets and has therefore established a full valuation allowance. For the year ended December 31, 2020 and 2019, the change in the valuation allowance was $105,559 and $21,062.

A reconciliation of the federal income tax rate to the Company's effective tax rate is as follows:

	December 31, 2020	December 31, 2019
Statutory federal income tax rate	21.0%	21.0%
State taxes, net of federal tax benefit	4.3%	0.0%
True-ups	(1.7)%	0.4%
Change in FV of warrant liabilities	(15.5)%	0.0%
Valuation allowance	(9.9)%	(4.3)%
Income tax provision	(1.7)%	17.1%

The Company files income tax returns in the U.S. federal jurisdiction and is subject to examination by the various taxing authorities. The Company's tax returns since inception remain open to examination by the taxing authorities.

12. FAIR VALUE MEASUREMENTS

The following table presents information about the Company's assets and liabilities that are measured at fair value on a recurring basis at December 31, 2020 and 2019, and indicates the fair value hierarchy of the valuation inputs the Company utilized to determine such fair value:

Description	Level	December 31, 2020	December 31, 2019
Assets:			
Cash and marketable securities held in Trust Account	1	$ 5,967,947	$32,005,205
Liabilities:			
Warrant Liability – Private Placement Warrants	3	$ 655,098	—

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

The significant unobservable 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:

	As of December 31, 2020
Stock price	$ 24.50
Strike price	$ 11.50
Term (in years)	5.0
Volatility	25.0%
Risk-free rate	0.4%
Dividend yield	0.0%
Fair value of private warrants	4.81

The following table provides a summary of the changes in fair value of the Company's Level 3 financial instruments that are measured at fair value on a recurring basis:

	Warrant Liability
Fair value as of December 31, 2019	$ —
Change in valuation inputs or other assumptions	655,098
Fair value as of December 31, 2020	$ 655,098

There were no transfers between Levels 1, 2 or 3 during the year ended December 31, 2020.

13. SUBSEQUENT EVENTS

The Company evaluates subsequent events and transactions that occur after the consolidated balance sheet date up to the date that the financial statements were issued. Based upon this review, other than as described below and in Note 2, the Company did not identify any subsequent events that would have required adjustment or disclosure in the financial statements.

Nasdaq Compliance

On January 15, 2021, the Company received notice from the Nasdaq that a Nasdaq Hearings Panel ("Panel") had granted the Company's request to continue its listing on Nasdaq through May 24, 2021 ("Extended Date").

On January 4, 2021, the Company received a notice from the Staff stating that the Company's failure to hold an annual stockholder meeting for the fiscal year ended December 31, 2019 by December 31, 2020, as required by Nasdaq Listing Rule 5820, could serve as an additional basis for delisting the Company's securities from Nasdaq. The Company requested a hearing before the Panel to appeal the Staff's determination with respect to both notices and the hearing was held on January 14, 2021. The Panel's decision is subject to certain conditions, including that the Company will have completed its proposed business combination (the "Business Combination") with NeuroRx on or before the Extended Date and that the combined company will have demonstrated compliance with all requirements for initial listing on Nasdaq. While the Company expects to complete the Business Combination by the Extended Date, the Company cannot assure you that it will be able to do so.

Subscription Agreement

On March 12, 2021, the Company entered into subscription agreements ("Subscription Agreements") with certain qualified institutional buyers and institutional accredited investors (collectively, the "PIPE Investors"), pursuant to which the Company will, substantially concurrently with, and contingent upon, the consummation of

the Merger, issue an aggregate of 1,000,000 shares of the Company Common Stock, par value $0.001 per share, to the PIPE Investors at a price of $10.00 per share, for aggregate gross proceeds to the Company of $10,000,000 (the "PIPE"). The closing of the PIPE is conditioned upon, among other things, (i) the substantially concurrent consummation of the Merger, (ii) the accuracy of all representations and warranties of the Company and the PIPE Investors in the Subscription Agreements, and the performance of all covenants of the Company and the PIPE Investors under the Subscription Agreements, (iii) the shares of the Company Common Stock shall have been approved for listing on the Nasdaq Capital Market, subject to official notice of issuance, and (iv) the Merger Agreement shall not have been terminated or rescinded, and no amendment, waiver or modification shall have occurred thereunder that would materially adversely affect the economic benefits that the PIPE Investor would reasonably expect to receive under the Subscription Agreement without having received the PIPE Investor's prior written consent (not to be unreasonably withheld, conditioned, or delayed).

Amendment to the Merger Agreement

On March 19, 2021, the Company entered into a second amendment ("Amendment") to the Merger Agreement with NeuroRx and Merger Sub. The Amendment extends the outside date by which the parties must consummate the Merger from April 23, 2021 to May 24, 2021.

Legal Proceedings

In connection with the proposed Merger with NeuroRx, a purported stockholder of the Company has filed a lawsuit and other purported stockholders have threatened to file lawsuits alleging breaches of fiduciary duty and violations of the disclosure requirements of the Exchange Act. The Company intends to defend the matters vigorously. These matters are in the early stages and the Company is currently unable to reasonably determine the outcome or estimate any potential losses, and, as such, has not recorded a loss contingency.

BIG ROCK PARTNERS ACQUISITION CORP.
CONDENSED CONSOLIDATED BALANCE SHEETS

	March 31, 2021 (Unaudited)	December 31, 2020
ASSETS		
Current Assets		
Cash	$ 232	$ 466
Prepaid expenses	7,850	30,350
Prepaid income taxes	51,642	51,642
Total Current Assets	59,724	82,458
Cash and marketable securities held in Trust Account	5,968,035	5,967,947
TOTAL ASSETS	**$ 6,027,759**	**$ 6,050,405**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities — accounts payable and accrued expenses	$ 643,693	$ 609,509
Promissory note — related party	885,604	862,148
Promissory notes payable	1,965,095	1,809,889
Warrant liability	1,313,324	655,098
Total Liabilities	**4,807,716**	**3,936,644**
Commitments and Contingencies (Note 7)		
Stockholders' Equity		
Preferred stock, $0.001 par value; 1,000,000 authorized; none issued and outstanding	—	—
Common stock, $0.001 par value; 100,000,000 shares authorized; 2,688,242 shares issued and outstanding	2,688	2,688
Additional paid-in capital	2,831,088	2,831,088
Accumulated deficit	(1,613,733)	(720,015)
Total Stockholders' Equity	**1,220,043**	**2,113,761**
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	**$ 6,027,759**	**$ 6,050,405**

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

BIG ROCK PARTNERS ACQUISITION CORP.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(UNAUDITED)

	Three Months Ended March 31,	
	2021	2020
Operating expenses	$ 235,580	$ 119,300
Loss from operations	**(235,580)**	**(119,300)**
Other (expense) income:		
Forgiveness of debt	—	352,071
Change in fair value of warrant liability	(658,226)	—
Interest income	88	113,077
Other (expense) income, net	(658,138)	465,148
(Loss) income before income taxes	(893,718)	345,848
Provision for income taxes	—	(72,628)
Net (loss) income	**$ (893,718)**	**$ 273,220**
Basic and diluted weighted average shares outstanding	**2,688,242**	**2,844,414**
Basic and diluted net (loss) income per share	**$ (0.33)**	**$ 0.10**

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

BIG ROCK PARTNERS ACQUISITION CORP.
CONDENSED CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(UNAUDITED)

THREE MONTHS ENDED MARCH 31, 2021

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount			
Balance — January 1, 2021	**2,688,242**	**$ 2,688**	**$ 2,831,088**	**$ (720,015)**	**$ 2,113,761**
Net loss	—	—	—	(893,718)	(893,718)
Balance — March 31, 2021	**2,688,242**	**2,688**	**2,831,088**	**(1,613,733)**	**1,220,043**

THREE MONTHS ENDED MARCH 31, 2020

	Common Stock		Additional Paid-in Capital	Retained Earnings	Total Stockholders' Equity
	Shares	Amount			
Balance — January 1, 2020	**2,844,414**	**$ 2,844**	**$ 4,627,662**	**$ 369,495**	**$ 5,000,001**
Change in value of common stock subject to possible redemption	(128,386)	(128)	(1,497,349)		(1,497,477)
Net income	—	—	—	273,220	273,220
Balance — March 31, 2020	**2,716,028**	**2,716**	**3,130,313**	**642,715**	**3,775,744**

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

BIG ROCK PARTNERS ACQUISITION CORP.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	Three Months Ended March 31,	
	2021	**2020**
Cash Flows from Operating Activities:		
Net (loss) income	$(893,718)	$ 273,220
Adjustments to reconcile net (loss) income to net cash used in operating activities:		
Interest earned on cash and marketable securities held in Trust Account	(88)	(113,077)
Change in fair value of warrant liability	658,226	—
Forgiveness of debt	—	(352,071)
Changes in operating assets and liabilities:		
Prepaid expenses	22,500	—
Prepaid incomes taxes	—	69,483
Accounts payable and accrued expenses	34,184	42,866
Income taxes payable	—	3,145
Net cash used in operating activities	**(178,896)**	**(76,434)**
Cash Flows from Investing Activities:		
Cash withdrawn from Trust Account to pay redeeming stockholders	—	25,997,965
Cash withdrawn from Trust Account to pay franchise taxes	—	120,830
Investment of cash in Trust Account	—	(192,520)
Net cash provided by investing activities	**—**	**25,926,275**
Cash Flows from Financing Activities:		
Proceeds from promissory notes	155,206	96,246
Proceeds from promissory note — related party	23,456	132,646
Redemption of common stock	—	(25,997,965)
Net cash provided by (used in) financing activities	**178,662**	**(25,769,073)**
Net Change in Cash	**(234)**	**80,768**
Cash — Beginning	466	6
Cash — Ending	**$ 232**	**$ 80,774**
Non-Cash Investing and Financing activities:		
Change in value of common stock subject to possible redemption	$ —	$ 1,497,477

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

BIG ROCK PARTNERS ACQUISITION CORP.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
MARCH 31, 2021
(Unaudited)

1. DESCRIPTION OF ORGANIZATION AND BUSINESS OPERATIONS

Big Rock Partners Acquisition Corp. (the "Company") is a blank check company incorporated in Delaware on September 18, 2017. The Company was formed for the purpose of acquiring, through a merger, share exchange, asset acquisition, stock purchase, reorganization, recapitalization, or other similar business transaction, one or more operating businesses or entities (a "Business Combination"). The Company is not limited to a particular industry or geographic region for purposes of consummating a Business Combination.

The Company has one subsidiary, Big Rock Merger Corp., a wholly-owned subsidiary of the Company incorporated in Delaware on January 22, 2019 ("Merger Sub").

All activity through March 31, 2021 relates to the Company's formation, its initial public offering ("Initial Public Offering"), which is described below, identifying a target company for a Business Combination, and activities in connection with the proposed acquisition of NeuroRx, Inc., a Delaware corporation ("NeuroRx") (see Note 8).

The registration statement for the Company's Initial Public Offering was declared effective on November 20, 2017. On November 22, 2017, the Company consummated the Initial Public Offering of 6,000,000 units (the "Units" and, with respect to the common stock included in the Units being offered, the "Public Shares"), generating gross proceeds of $60,000,000, which is described in Note 3. Each Unit consists of one share of common stock, one right ("Public Right") and one-half of one warrant ("Public Warrant"). Each Public Right will convert intoone-tenth (1/10) of one share of common stock upon consummation of a Business Combination. Each whole Public Warrant entitles the holder to purchase one share of common stock at an exercise price of $11.50 per whole share.

Simultaneously with the Initial Public Offering, the Company consummated the sale of 250,000 units (the "Private Placement Units") at a price of $10.00 per Unit in a private placement to Big Rock Partners Sponsor, LLC (the "Sponsor"), generating gross proceeds of $2,500,000, which is described in Note 4.

Following the closing of the Initial Public Offering, $60,000,000 ($10.00 per Unit) from the net proceeds of the sale of the Units in the Initial Public Offering and the Private Placement Units was placed in a trust account (the "Trust Account") which may be invested in U.S. government securities, within the meaning set forth in Section 2(a)(16) of the Investment Company Act of 1940, as amended (the "Investment Company Act"), with a maturity of 180 days or less or in any open-ended investment company that holds itself out as a money market fund selected by the Company meeting the conditions of Rule 2a-7 of the Investment Company Act, as determined by the Company, until the earlier of: (i) the consummation of a Business Combination or (ii) the distribution of the Trust Account, as described below.

On November 29, 2017, in connection with the underwriters' exercise of their over-allotment option in full, the Company consummated the sale of an additional 900,000 Units, and the sale of an additional 22,500 Private Placement Units at $10.00 per unit, generating total gross proceeds of $9,225,000. A total of $9,000,000 of the net proceeds were deposited in the Trust Account, bringing the aggregate proceeds held in the Trust Account to $69,000,000.

At the closing of the Initial Public Offering, the Company issued EarlyBirdCapital, Inc. ("EarlyBirdCapital") and its designees 120,000 shares of common stock (the "Representative Shares"). On November 29, 2017, the Company issued an additional 18,000 Representative Shares for no consideration (see Note 9).

Transaction costs amounted to $2,172,419, consisting of $1,725,000 of underwriting fees and $447,419 of Initial Public Offering costs.

BIG ROCK PARTNERS ACQUISITION CORP.
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The Company's management has broad discretion with respect to the specific application of the net proceeds of the Initial Public Offering and Private Placement Units, although substantially all of the net proceeds are intended to be applied generally toward consummating a Business Combination. The Company's initial Business Combination must be with one or more target businesses that together have a fair market value equal to at least 80% of the balance in the Trust Account (excluding taxes payable on income earned on the Trust Account) at the time of the signing an agreement to enter into a Business Combination. The Company will only complete a Business Combination if the post-Business Combination company owns or acquires 50% or more of the outstanding voting securities of the target or otherwise acquires a controlling interest in the target sufficient for it not to be required to register as an investment company under the Investment Company Act. There is no assurance that the Company will be able to successfully effect a Business Combination.

The Company will provide its stockholders with the opportunity to redeem all or a portion of their shares included in the Units sold in the Initial Public Offering (the "Public Shares") upon the completion of a Business Combination either (i) in connection with a stockholder meeting called to approve the Business Combination or (ii) by means of a tender offer. The decision as to whether the Company will seek stockholder approval of a Business Combination or conduct a tender offer will be made by the Company, solely in its discretion. The stockholders will be entitled to redeem their shares for a pro rata portion of the amount then on deposit in the Trust Account ($10.00 per share, plus any pro rata interest earned on the funds held in the Trust Account and not previously released to the Company to pay its franchise and income tax obligations). There will be no redemption rights upon the completion of a Business Combination with respect to the Company's warrants.

The Company will proceed with a Business Combination if the Company has net tangible assets of at least $5,000,001 upon such consummation of a Business Combination and, if the Company seeks stockholder approval, a majority of the outstanding shares voted are voted in favor of the Business Combination. If a stockholder vote is not required by law and the Company does not decide to hold a stockholder vote for business or other legal reasons, the Company will, pursuant to its Amended and Restated Certificate of Incorporation, conduct the redemptions pursuant to the tender offer rules of the Securities and Exchange Commission (the "SEC"), and file tender offer documents with the SEC prior to completing a Business Combination. If, however, a stockholder approval of the transaction is required by law, or the Company decides to obtain stockholder approval for business or other legal reasons, the Company will offer to redeem shares in conjunction with a proxy solicitation pursuant to the proxy rules and not pursuant to the tender offer rules. If the Company seeks stockholder approval in connection with a Business Combination, the Company's Sponsor, officers and directors (the "Initial Stockholders") have agreed (a) to vote their Founder's Shares (as defined in Note 5), Placement Shares (as defined in Note 4) and any Public Shares held by them in favor of approving a Business Combination and (b) not to convert any Founder's Shares, Placement Shares and any Public Shares held by them in connection with a stockholder vote to approve a Business Combination or sell any such shares to the Company in a tender offer in connection with a Business Combination. Additionally, each public stockholder may elect to redeem their Public Shares irrespective of whether they vote for or against the proposed transaction.

The Company initially had until November 22, 2018 to complete a Business Combination. However, if the Company anticipated that it would not be able to consummate a Business Combination by November 22, 2018, the Company could extend the period of time to consummate a Business Combination up to two times, each by an additional three months. Pursuant to the terms of the Company's Amended and Restated Certificate of Incorporation and the trust agreement entered into between the Company and Continental Stock Transfer & Trust Company on November 20, 2017, in order to extend the time available for the Company to consummate a Business Combination, the Sponsor or its affiliates or designees must deposit into the Trust Account $690,000

BIG ROCK PARTNERS ACQUISITION CORP.
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($0.10 per share) for each three month extension, up to an aggregate of $1,380,000, or $0.20 per share, if the Company extends for the full six months, on or prior to the date of the applicable deadline.

On November 20, 2018, the period of time for the Company to consummate a Business Combination was extended for an additional three-month period ending on February 22, 2019, and, accordingly, $690,000 was deposited into the Trust Account. On February 21, 2019, the Company further extended the time required to consummate a Business Combination to May 22, 2019 and deposited an additional $690,000 into the Trust Account. The deposits were funded by non-interest bearing unsecured promissory notes from BRAC Lending Group LLC, an affiliate of the underwriter (the "BRAC") (see Note 6). The notes are repayable upon the consummation of a Business Combination (see Note 6).

On May 21, 2019, the Company's stockholders approved an amendment to its Amended and Restated Certificate of Incorporation to extend the period of time for which the Company was required to consummate a Business Combination to August 22, 2019. The number of shares of common stock presented for redemption in connection with the extension was 2,119,772. The Company paid cash in the aggregate amount of $22,099,233, or approximately $10.43 per share, to redeeming stockholders. The Company agreed to deposit, or cause to be deposited on its behalf, into the Trust Account $0.02 for each public share outstanding for each 30-day extension period utilized through August 22, 2019. In connection with this extension, the Company deposited an aggregate of $286,814 into the Trust Account, of which $280,000 was contributed to the Trust Account by a third party and is not required to be repaid by the Company. Accordingly, the Company has recorded this amount as a credit to additional paid in capital in the accompanying statements of stockholders' equity. In order to pay for part of the third extension payment, the Company issued an unsecured promissory note (the "Second Note") in favor of BRAC, in the original principal amount of $6,814 (see Note 6).

On August 21, 2019, the Company stockholders approved an amendment to the Company's Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Extension") from August 22, 2019 to November 22, 2019. The number of shares of common stock presented for redemption in connection with the Extension was 846,888. The Company paid cash in the aggregate amount of $8,891,378, or approximately $10.50 per share, to redeeming stockholders. The Company agreed to deposit, or cause to be deposited on its behalf, into the Trust Account $0.02 for each public share outstanding for each 30-day extension period utilized through the Extension. In connection with this extension, the Company deposited an aggregate of $236,000 into the Trust Account to fund this extension payment, which amount was loaned to the Company by AZ Property Partners, LLC ("AZ Property Partners"), an entity majority owned and controlled by Richard Ackerman, the Company's Chairman, President and Chief Executive Officer, and BRAC (see Note 6).

On November 21, 2019, the Company's stockholders approved an amendment to the Company's Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Second Extension") from November 22, 2019 to March 23, 2020. The number of shares of common stock presented for redemption in connection with the Second Extension was 919,091. The Company paid cash in the aggregate amount of $9,736,077, or approximately $10.59 per share, to redeeming stockholders. The Company agreed to deposit, or cause to be deposited on its behalf, into the Trust Account $0.02 for each public share outstanding for each 30-day extension period utilized through the Second Extension. In connection with this extension, the Company deposited an aggregate of $60,285 into the Trust Account to fund the first thirty-day extension through December 22, 2019, which amount was loaned to the Company by AZ Property Partners and BRAC (see Note 6). In January and February 2020, AZ Property Partners and BRAC loaned the Company an additional aggregate amount of $90,427 each to pay for the extension through March 23, 2020, which was deposited into the Trust Account.

BIG ROCK PARTNERS ACQUISITION CORP.
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On March 23, 2020, the Company's stockholders approved an amendment to the Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Third Extension") from March 23, 2020 to July 23, 2020. The number of shares of common stock presented for redemption in connection with the Third Extension was 2,433,721. The Company paid cash in the aggregate amount of $25,997,965, or approximately $10.68 per share, to redeeming stockholders. The Company agreed to deposit, or cause to be deposited on its behalf, into the Trust Account $0.02 for each public share outstanding for each 30-day extension period utilized through the Third Extension. Notwithstanding the foregoing, if the volume weighted average price of the Company's common stock during the 10-day trading period ending on the 3rd day prior to the end of any applicable monthly period was equal to or greater than $11.00 and the trading volume during the 10-day trading period exceeded 100,000 shares, the obligation to make any particular deposit would terminate with respect to the immediately following monthly period (but not with respect to any other future monthly period). In connection with this extension, the Company deposited an aggregate of $34,858 into the Trust Account to fund the extension through July 23, 2020, of which $17,429 was loaned to the Company by each of AZ Property Partners and BRAC.

On July 23, 2020, the Company's stockholders approved an amendment to the Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Fourth Extension") from July 23, 2020 to December 23, 2020. The number of shares of common stock presented for redemption in connection with the Fourth Extension was 27,786. The Company paid cash in amount of $299,253, or approximately $10.77 per share, to redeeming stockholders. The Company agreed to deposit, or cause to be deposited on its behalf, into the Trust Account $0.02 for each public share outstanding for each 30-day extension period utilized through the Fourth Extension. In connection with this extension, as of December 31, 2020, the Company deposited an aggregate of $55,274 into the Trust Account to fund the extension through December 23, 2020, which amounts were loaned to the Company by AZ Property Partners and BRAC. Notwithstanding the foregoing, if the volume weighted average price of the Company's common stock during the 10-day trading period ending on the 3rd day prior to the end of any applicable monthly period is equal to or greater than $11.00 and the trading volume during the 10-day trading period exceeds 100,000 shares, the obligation to make any particular deposit would terminate with respect to the immediately following monthly period (but not with respect to any other future monthly period).

On December 18, 2020, the Company held a special meeting pursuant to which the Company's stockholders approved an amendment to the Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Fifth Extension") from December 23, 2020 to April 23, 2021 (the "Extended Date"). In connection with this extension, no stockholders elected to redeem their shares of common stock.

On April 21, 2021, the Company held a special meeting pursuant to which the Company's stockholders approved an amendment to the Amended and Restated Certificate of Incorporation to extend the period of time for which the Company is required to consummate a Business Combination (the "Sixth Extension") from April 23, 2021 to May 24, 2021 (the "Extended Date"). The number of shares of common stock presented for redemption in connection with the Fourth Extension was 330. The Company paid cash in amount of $3,563, or approximately $10.80 per share, to redeeming stockholders.

If the Company is unable to complete a Business Combination by the Extended Date, the Company will (i) cease all operations except for the purpose of winding up, (ii) as promptly as reasonably possible but no more than ten business days thereafter, redeem 100% of the outstanding Public Shares, at a per share price, payable in cash, equal to the aggregate amount then on deposit in the Trust Account, including interest earned (net of taxes

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payable), divided by the number of then outstanding Public Shares, which redemption will completely extinguish public stockholders' rights as stockholders (including the right to receive further liquidation distributions, if any), subject to applicable law, and (iii) as promptly as reasonably possible following such redemption, subject to the approval of the remaining stockholders and the Company's board of directors, proceed to commence a voluntary liquidation and thereby a formal dissolution of the Company, subject in each case to its obligations to provide for claims of creditors and the requirements of applicable law. In the event of such distribution, it is possible that the per share value of the assets remaining available for distribution (including Trust Account assets) will be less than the $10.00 per Unit in the Initial Public Offering.

The Initial Stockholders have agreed to (i) waive their redemption rights with respect to Founder Shares, Placement Shares and any Public Shares they may acquire during or after the Initial Public Offering in connection with the consummation of a Business Combination, (ii) to waive their rights to liquidating distributions from the Trust Account with respect to their Founder's Shares and Placement Shares if the Company fails to consummate a Business Combination by the Extended Date and (iii) not to propose an amendment to the Company's Amended and Restated Certificate of Incorporation that would affect the substance or timing of the Company's obligation to redeem 100% of its Public Shares if the Company does not complete a Business Combination, unless the Company provides the public stockholders with the opportunity to redeem their Public Shares in conjunction with any such amendment. However, the Initial Stockholders will be entitled to liquidating distributions with respect to any Public Shares acquired if the Company fails to consummate a Business Combination or liquidates by Extended Date.

In order to protect the amounts held in the Trust Account, A/Z Property Partners, has agreed that it will be liable to ensure that the proceeds in the Trust Account are not reduced below $10.00 per share by the claims of target businesses or claims of vendors or other entities that are owed money by the Company for services rendered or contracted for or products sold to the Company. Additionally, the agreement entered into by AZ Property Partners specifically provides for two exceptions to the indemnity it has given: it will have no liability (1) as to any claimed amounts owed to a target business or vendor or other entity who has executed an agreement with the Company waiving any right, title, interest or claim of any kind they may have in or to any monies held in the Trust Account, or (2) as to any claims for indemnification by the underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended (the "Securities Act"). The Company will seek to reduce the possibility that AZ Property Partners will have to indemnify the Trust Account due to claims of creditors by endeavoring to have all vendors, service providers, prospective target businesses or other entities with which the Company does business, execute agreements with the Company waiving any right, title, interest or claim of any kind in or to monies held in the Trust Account.

NASDAQ Notifications

On January 4, 2021, the Company received a notice from the Staff stating that the Company's failure to hold an annual stockholder meeting for the fiscal year ended December 31, 2019 by December 31, 2020, as required by Nasdaq Listing Rule 5820, could serve as an additional basis for delisting the Company's securities from Nasdaq. The Company requested a hearing before the Panel to appeal the Staff's determination with respect to both notices and the hearing was held on January 14, 2021. The Panel's decision is subject to certain conditions, including that the Company will have completed its proposed business combination (the "Business Combination") with NeuroRx on or before the Extended Date and that the combined company will have demonstrated compliance with all requirements for initial listing on Nasdaq. While the Company expects to complete the Business Combination by the Extended Date, the Company cannot assure you that it will be able to do so.

On January 15, 2021, the Company received notice from the Nasdaq that a Nasdaq Hearings Panel ("Panel") had granted the Company's request to continue its listing on Nasdaq through May 24, 2021 ("Extended Date").

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Liquidity

As of March 31, 2021, the Company had $232 in its operating bank account, $5,968,035 in cash and marketable securities held in the Trust Account to be used for a Business Combination or to repurchase or convert stock in connection therewith and an adjusted working capital deficit of $643,461, which excludes prepaid income taxes of $59,492, which have been paid from amounts in the Trust Account. As of March 31, 2021, approximately $120,000 of the amount on deposit in the Trust Account represented interest income, which is available to pay the Company's tax obligations. To date, the Company has withdrawn $716,788 of interest from the Trust Account in order to pay the Company's franchise and income taxes, of which no amounts were withdrawn during the three months ended March 31, 2021.

On November 17, 2018, the Company entered into an agreement (the "Agreement") with the Sponsor and BRAC, pursuant to which the Sponsor agreed to be responsible for all liabilities of the Company as of November 17, 2018 and to loan the Company the funds necessary to pay the expenses of the Company other than Business Combination expenses through the closing of a Business Combination when and as needed. If a Business Combination is not consummated, all outstanding loans made by the Sponsor will be forgiven (see Note 6). In addition, BRAC agreed to loan the Company all funds necessary to pay expenses incurred in connection with and in order to consummate a business combination (the "Business Combination Expenses") and such loans will be added to the Initial Notes (as defined in Note 6). If the Company does not consummate a Business Combination, all outstanding loans under the Notes will be forgiven, except to the extent of any funds held outside of the Trust Account after paying all other fees and expenses of the Company incurred prior to the date of such failure to consummate a Business Combination (see Note 6).

The Company may raise additional capital through loans or additional investments from the Sponsor or its stockholders, officers, directors, or third parties. Other than as described above, the Company's officers and directors and the Sponsor may, but are not obligated to, loan the Company funds, from time to time, in whatever amount they deem reasonable in their sole discretion, to meet the Company's working capital needs.

The Company does not believe it will need to raise additional funds in order to meet expenditures required for operating its business. Neither the Sponsor, nor any of the stockholders, officers or directors, or third parties are under any obligation to advance funds to, or invest in, the Company, except as discussed above. Accordingly, the Company may not be able to obtain additional financing. If the Company is unable to raise additional capital, it may be required to take additional measures to conserve liquidity, which could include, but not necessarily be limited to suspending the pursuit of a potential transaction. The Company cannot provide any assurance that new financing will be available to it on commercially acceptable terms, if at all. Even if the Company can obtain sufficient financing or raise additional capital, it only has until May 24, 2021 (or as may be extended) to consummate a Business Combination. There is no assurance that the Company will be able to do so prior to May 24, 2021, or as may be extended by shareholder vote.

Risks and Uncertainties

Management continues to evaluate the impact of the COVID-19 pandemic and has concluded that while it is reasonably possible that the virus could have a negative effect on the Company's financial position, results of its operations and/or search for a target company, the specific impact is not readily determinable as of the date of these consolidated financial statements. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

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2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The accompanying unaudited condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") for interim financial information and in accordance with the instructions to Form 10-Q and Article 8 of Regulation S-X of the Securities and Exchange Commission (the "SEC"). Certain information or footnote disclosures normally included in financial statements prepared in accordance with GAAP have been condensed or omitted, pursuant to the rules and regulations of the SEC for interim financial reporting. Accordingly, they do not include all the information and footnotes necessary for a comprehensive presentation of financial position, results of operations, or cash flows. In the opinion of management, the accompanying unaudited condensed financial statements include all adjustments, consisting of a normal recurring nature, which are necessary for a fair presentation of the financial position, operating results and cash flows for the periods presented.

The accompanying unaudited condensed financial statements should be read in conjunction with the Company's Annual Report as amended on Form 10-K/A for the year ended December 31, 2020 as filed with the SEC on May 14, 2021, which contains the audited financial statements and notes thereto. The interim results for the three months ended March 31, 2021 are not necessarily indicative of the results to be expected for the year ending December 31, 2021 or for any future interim periods.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiary. All significant intercompany balances and transactions have been eliminated in consolidation.

Emerging Growth Company

The Company is an "emerging growth company," as defined in Section 2(a) of the Securities Act, as modified by the Jumpstart Our Business Startups Act of 2012 (the "JOBS Act"), and it may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved.

Further, Section 102(b)(1) of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period which means that when a standard is issued or revised and it has different application dates for public or private companies, the Company, as an emerging growth company, will adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of the Company's consolidated financial statements with another public company which is neither an emerging growth company nor an emerging growth company which has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

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Use of Estimates

The preparation of condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of revenues and expenses during the reporting period.

Making estimates requires management to exercise significant judgment. It is at least reasonably possible that the estimate of the effect of a condition, situation or set of circumstances that existed at the date of the financial statements, which management considered in formulating its estimate, could change in the near term due to one or more future confirming events. Accordingly, the actual results could differ significantly from the Company's estimates.

Cash and Cash Equivalents

The Company considers all short-term investments with an original maturity of three months or less when purchased to be cash equivalents. The Company did not have any cash equivalents as of March 31, 2021 and December 31, 2020.

Cash and Marketable Securities Held in Trust Account

At March 31, 2021 and December 31, 2020, the assets held in the Trust Account were held in money market funds, which are invested in U.S. Treasury securities. Through March 31, 2021, the Company has withdrawn $716,788 of interest from the Trust Account in order to pay its franchise and income taxes, of which no amounts were withdrawn during the three months ended March 31, 2021.

Warrant Liability

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

For issued or modified warrants that meet all of the criteria for equity classification, the warrants are required to be recorded as a component of additional paid-in capital at the time of issuance. For issued or modified warrants that do not meet all the criteria for equity classification, the warrants are required to be recorded at their initial fair value on the date of issuance, and each balance sheet date thereafter. Changes in the estimated fair value of the warrants are recognized as a non-cash gain or loss on the statements of operations. The fair value of the Placement Warrants was estimated using a Black Scholes valuation approach (see Note 10).

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Income Taxes

The Company complies with the accounting and reporting requirements of ASC Topic 740 "Income Taxes," which requires an asset and liability approach to financial accounting and reporting for income taxes. Deferred income tax assets and liabilities are computed for differences between the financial statement and tax bases of assets and liabilities that will result in future taxable or deductible amounts, based on enacted tax laws and rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized.

ASC Topic 740 prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more-likely-than-not to be sustained upon examination by taxing authorities. The Company recognizes accrued interest and penalties related to unrecognized tax benefits as income tax expense. As of March 31, 2021 and December 31, 2020, there were no unrecognized tax benefits and no amounts accrued for interest and penalties. The Company is currently not aware of any issues under review that could result in significant payments, accruals or material deviation from its position. The effective tax rate differs from the statutory tax rate of 25% for the three months ended March 31, 2021 and 2020 primarily due to permanent differences.

The Company may be subject to potential examination by federal, state and city taxing authorities in the areas of income taxes. These potential examinations may include questioning the timing and amount of deductions, the nexus of income among various tax jurisdictions and compliance with federal, state and city tax laws. The Company's management does not expect that the total amount of unrecognized tax benefits will materially change over the next twelve months.

Net Income (Loss) Income Per Common Share

Net income (loss) per share is computed by dividing net income by the weighted-average number of shares of common stock outstanding during the period. The Company has not considered the effect of (1) warrants sold in the Initial Public Offering and private placement to purchase 3,586,250 shares of common stock, (2) rights sold in the Initial Public Offering and private placement that convert into 717,250 shares of common stock and (3) 600,000 shares of common stock, warrants to purchase 300,000 shares of common stock and rights that convert into 60,000 shares of common stock in the unit purchase option sold to the underwriter, in the calculation of diluted (loss) income per share, since the exercise of the warrants are contingent upon the occurrence of future events and the inclusion of such warrants would be anti-dilutive.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist of a cash account in a financial institution which, at times may exceed the Federal depository insurance coverage of $250,000. The Company has not experienced losses on this account and management believes the Company is not exposed to significant risks on such account.

Fair Value of Financial Instruments

The Company applies ASC 820, Fair Value Measurement ("ASC 820"), which establishes framework for measuring fair value and clarifies the definition of fair value within that framework. ASC 820 defines fair value

as an exit price, which is the price that would be received for an asset or paid to transfer a liability in the Company's principal or most advantageous market in an orderly transaction between market participants on the measurement date. The fair value hierarchy established in ASC 820 generally requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. Observable inputs reflect the assumptions that market participants would use in pricing the asset or liability and are developed based on market data obtained from sources independent of the reporting entity. Unobservable inputs reflect the entity's own assumptions based on market data and the entity's judgments about the assumptions that market participants would use in pricing the asset or liability and are to be developed based on the best information available in the circumstances.

The valuation hierarchy is composed of three levels. The classification within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement. The levels within the valuation hierarchy are described below:

Level 1 — Assets and liabilities with unadjusted, quoted prices listed on active market exchanges. Inputs to the fair value measurement are observable inputs, such as quoted prices in active markets for identical assets or liabilities.

Level 2 — Inputs to the fair value measurement are determined using prices for recently traded assets and liabilities with similar underlying terms, as well as direct or indirect observable inputs, such as interest rates and yield curves that are observable at commonly quoted intervals.

Level 3 — Inputs to the fair value measurement are unobservable inputs, such as estimates, assumptions, and valuation techniques when little or no market data exists for the assets or liabilities.

The fair value of the Company's assets and liabilities, which qualify as financial instruments under ASC Topic 820, "Fair Value Measurement," approximates the carrying amounts represented in the accompanying consolidated balance sheets, primarily due to their short-term nature.

See Note 10 for additional information on assets and liabilities measured at fair value.

Derivative Financial Instruments

The Company evaluates its financial instruments to determine if such instruments are derivatives or contain features that qualify as embedded derivatives in accordance with ASC Topic 815, "Derivatives and Hedging". For derivative financial instruments that are accounted for as liabilities, the derivative instrument is initially recorded at its fair value on the grant date and is then re-valued at each reporting date, with changes in the fair value reported in the statements of operations. The classification of derivative instruments, including whether such instruments should be recorded as liabilities or as equity, is evaluated at the end of each reporting period. Derivative liabilities are classified in the balance sheet as current or non-current based on whether or not net-cash settlement or conversion of the instrument could be required within 12 months of the balance sheet date.

Recently Issued Accounting Standards

In August 2020, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU")2020-06, Debt — Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging — Contracts in Entity's Own Equity (Subtopic 815-40) ("ASU 2020-06") to simplify accounting for

certain financial instruments. ASU 2020-06 eliminates the current models that require separation of beneficial conversion and cash conversion features from convertible instruments and simplifies the derivative scope exception guidance pertaining to equity classification of contracts in an entity's own equity. The new standard also introduces additional disclosures for convertible debt and freestanding instruments that are indexed to and settled in an entity's own equity. ASU 2020-06 amends the diluted earnings per share guidance, including the requirement to use theif-converted method for all convertible instruments. ASU 2020-06 is effective January 1, 2022 and should be applied on a full or modified retrospective basis, with early adoption permitted beginning on January 1, 2021. The Company adopted ASU 2020-06 on January 1, 2021.The adoption of ASU2020-06 did not have an impact on the Company's financial statements.

Management does not believe that any other recently issued, but not yet effective, accounting standards, if currently adopted, would have a material effect on the Company's condensed financial statements.

3. INITIAL PUBLIC OFFERING

Pursuant to the Initial Public Offering, the Company sold 6,900,000 Units at a purchase price of $10.00 per Unit, which includes the full exercise by the underwriters of their over-allotment option of 900,000 Units at $10.00 per Unit. Each Unit consists of one share of common stock, one Public Right and one Public Warrant. Each Public Right will convert into one-tenth (1/10) of one share of common stock upon consummation of a Business Combination (see Note 8). Each whole Public Warrant entitles the holder to purchase one share of common stock at an exercise price of $11.50 per whole share (see Note 9).

4. PRIVATE PLACEMENT

Simultaneously with the Initial Public Offering, the Sponsor purchased 250,000 Private Placement Units, at $10.00 per Private Placement Unit, for an aggregate purchase price of $2,500,000. On November 29, 2017, the Company consummated the sale of an additional 22,500 Private Placement Units at a price of $10.00 per unit, which were purchased by the Sponsor, generating gross proceeds of $225,000. Each Private Placement Unit consists of one share of common stock ("Placement Share"), one right ("Placement Right") and one-half of one warrant (each, a "Placement Warrant"), each whole Placement Warrant exercisable to purchase one share of common stock at an exercise price of $11.50. The proceeds from the Private Placement Units were added to the proceeds from the Initial Public Offering held in the Trust Account. If the Company does not complete a Business Combination within the Combination Period, the proceeds from the sale of the Private Placement Units will be used to fund the redemption of the Public Shares (subject to the requirements of applicable law), and the Placement Rights and the Placement Warrants will expire worthless.

The Private Placement Units are identical to the Units sold in the Initial Public Offering except that the Placement Warrants (i) are not redeemable by the Company and (ii) may be exercised for cash or on a cashless basis, so long as they are held by the initial purchaser or any of its permitted transferees. In addition, the Private Placement Units and their component securities may not be transferable, assignable or salable until after the consummation of a Business Combination, subject to certain limited exceptions. If the Placement Warrants are held by someone other than the initial purchasers or their permitted transferees, the Placement Warrants will be redeemable by the Company and exercisable by such holders on the same basis as the Public Warrants.

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5. RELATED PARTY TRANSACTIONS

Founder Shares

In September 2017, the Company issued an aggregate of 1,437,500 shares of common stock to the Sponsor (the "Founder Shares") for an aggregate purchase price of $25,000. On November 20, 2017, the Company effectuated a 1.2-for-1 stock dividend of its common stock resulting in an aggregate of 1,725,000 Founder Shares outstanding. The Founder Shares included an aggregate of up to 225,000 shares subject to forfeiture by the Sponsor to the extent that the underwriters' over-allotment was not exercised in full or in part, so that the Initial Stockholders would own 20% of the Company's issued and outstanding shares after the Initial Public Offering (excluding the Private Placement Units and the Representative Shares (as defined in Note 8)). As a result of the underwriters' election to fully exercise their over-allotment option, 225,000 Founder Shares are no longer subject to forfeiture.

The Initial Stockholders have agreed not to transfer, assign or sell any of the Founder's Shares until the earlier of (i) one year after the date of the consummation of a Business Combination, or (ii) with respect to 50% of the Founder Shares, the date on which the closing price of the Company's common stock equals or exceeds $12.50 per share (as adjusted for stock splits, stock dividends, reorganizations and recapitalizations) for any 20 trading days within any 30-trading day period commencing after a Business Combination, or earlier, in each case, if subsequent to a Business Combination, the Company consummates a subsequent liquidation, merger, stock exchange, reorganization or other similar transaction which results in all of the Company's stockholders having the right to exchange their common stock for cash, securities or other property.

Related Party Loans

In order to finance transaction costs in connection with a Business Combination, the Sponsor, an affiliate of the Sponsor, or the Company's officers and directors may, but are not obligated to, loan the Company funds from time to time or at any time, as may be required ("Working Capital Loans"). Each Working Capital Loan would be evidenced by a promissory note. The Working Capital Loans would either be paid upon consummation of a Business Combination, without interest, or, at the holder's discretion, up to $1,500,000 of the Working Capital Loans may be converted into units at a price of $10.00 per unit. The units would be identical to the Private Placement Units. In the event that a Business Combination does not close, the loans will be forgiven. There were no outstanding Working Capital Loans at March 31, 2021 and December 31, 2020.

6. EXTENSION FUNDING AGREEMENT AND PROMISSORY NOTES

On November 17, 2018, the Company entered into an Extension Funding Agreement with the Sponsor and BRAC. Pursuant to the Extension Funding Agreement, the Sponsor transferred an aggregate of 1,500,000 Founders Shares to BRAC in exchange for the agreements set forth below and aggregate cash consideration of $1.00.

Pursuant to the Extension Funding Agreement, the Sponsor agreed to extend the period of time the Company has to consummate a Business Combination up to two times for an aggregate of up to six months and BRAC agreed to loan the Company the funds necessary to obtain the extensions (the "Extensions"). On November 20, 2018 and February 21, 2019, the Company issued unsecured promissory notes (the "Initial Notes") in favor of BRAC, in the original principal amount of $690,000 each (or an aggregate of $1,380,000), to provide the Company the funds necessary to obtain an aggregate of six-months of Extensions. Pursuant to the Extension Funding Agreement, BRAC has also agreed to loan the Company all funds necessary to pay expenses incurred in

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connection with and in order to consummate a Business Combination (the "Business Combination Expenses") and such loans will be added to the Initial Notes.

In connection with the stockholders' approval of the extended date of August 22, 2019, the Company issued another unsecured promissory note (the "Second Note") in favor of BRAC in order to pay for part of the third extension payment in the original principal amount of $6,814.

On December 31, 2019, the Company issued an unsecured promissory note, as amended (the "Third Note" and, together with the Initial Notes and the Second Note, the "Extension Notes"), in favor of BRAC in the aggregate principal amount of $1,965,095 in order to pay for part of the extension payments. Through March 31, 2021, BRAC loaned the Company an aggregate of $578,281, of which $155,206 was loaned during the three months ended March 31, 2021 for working capital purposes.

If the Company does not consummate a Business Combination, all outstanding loans under the Extension Notes will be forgiven, except to the extent of any funds held outside of the Trust Account after paying all other fees and expenses of the Company incurred prior to the date of such failure to consummate a Business Combination.

As of March 31, 2021 and December 31, 2020, the outstanding balance under the Extension Notes amounted to an aggregate of $1,965,095 and 1,809,889, respectively.

The Sponsor has agreed to be responsible for all liabilities of the Company effective November 17, 2018, except for liabilities associated with the possible redemption of shares by the Company's shareholders, as described in the Company's Amended and Restated Certificate of Incorporation. The Sponsor has also agreed to loan the Company the funds necessary to pay the expenses of the Company other than the Business Combination Expenses through the closing of a Business Combination when and as needed in order for the Company to continue in operation (the "Non-Business Combination Related Expenses"). Upon consummation of a Business Combination, up to $200,000 of the Non-Business Combination Related Expenses will be repaid by the Company to the Sponsor provided that the Company has funds available to it sufficient to repay such expenses (the "Cap") as well as to pay for all stockholder redemptions, all Business Combination Expenses, repayment of the Extension Notes, and any funds necessary for the working capital requirements of the Company following closing of the Business Combination. Any remaining amounts in excess of the Cap will be forgiven. On December 31, 2019, the Company issued an unsecured promissory note to the Sponsor, as amended, in the principal amount of $885,604 to pay for Non-Business Combination Related Expenses. If the Company does not consummate a Business Combination, all outstanding loans made by the Sponsor to cover the Non-Business Combination Related Expenses will be forgiven, except as set forth above.

Through March 31,2021, AZ Property Partners loaned the Company an aggregate of $885,604, of which $23,456 was loaned during the three months ended March 31, 2021 to pay for Non-Business Combination Related Expenses

As of March 31, 2021 and December 31, 2020, the outstanding balance under promissory note with AZ Property Partners amounted to $885,604 and $862,148, respectively.

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7. COMMITMENTS AND CONTINGENCIES

Forgiveness of Debt

During the three months ended March 31, 2020, one of the Company's service providers forgave certain amounts due to them in connection with previously provided services. As a result, the Company recorded a forgiveness of debt in the amount of $352,071.

Registration Rights

Pursuant to a registration rights agreement entered into on November 20, 2017, the holders of the Company's common stock prior to the Initial Public Offering (the "Founder Shares"), Private Placement Units (and their underlying securities), the shares issued to EarlyBirdCapital at the closing of the Initial Public Offering (the "Representative Shares") and any Units that may be issued upon conversion of the working capital loans (and their underlying securities) are entitled to registration rights. The holders of a majority of these securities are entitled to make up to three demands, excluding short form demands, that the Company register such securities. The holders of the majority of the Founder's Shares can elect to exercise these registration rights at any time commencing three months prior to the date on which these shares of common stock are to be released from escrow. The holders of a majority of the Private Placement Units or Units issued to the Sponsor, officers, directors or their affiliates in payment of working capital loans made to the Company (in each case, including the underlying securities) can elect to exercise these registration rights at any time after the Company consummates a Business Combination. In addition, the holders will have certain "piggy-back" registration rights with respect to registration statements filed subsequent to the completion of a Business Combination and rights to require the Company to register for resale such securities pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"). Notwithstanding anything to the contrary, EarlyBirdCapital and its designees may participate in a "piggy-back" registration during the seven-year period beginning on the effective date of the registration statement. However, the registration rights agreement will provide that the Company will not permit any registration statement filed under the Securities Act to become effective until termination of the applicable lock-up period. The Company will bear the expenses incurred in connection with the filing of any such registration statements.

Business Combination Marketing Agreement

The Company has engaged EarlyBirdCapital as an advisor in connection with a Business Combination to assist the Company in holding meetings with its stockholders to discuss a potential Business Combination and the target business' attributes, introduce the Company to potential investors that are interested in purchasing securities, assist the Company in obtaining stockholder approval for the Business Combination and assist the Company with its press releases and public filings in connection with a Business Combination. The Company will pay EarlyBirdCapital a cash fee for such services upon the consummation of a Business Combination in an amount equal to 4.0% of the gross proceeds of the Initial Public Offering (exclusive of any applicable finders' fees which might become payable). If a Business Combination is not consummated for any reason, no fee will be due or payable.

Merger Agreement

On December 13, 2020, the Company, NeuroRx and Merger Sub, entered into an Agreement and Plan of Merger ("Merger Agreement"). Pursuant to the Merger Agreement, Merger Sub will merge with and into NeuroRx, with NeuroRx surviving the merger ("Merger"). As a result of the Merger, and upon consummation of the Merger and

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the other transactions contemplated by the Merger Agreement ("Transactions"), NeuroRx will become a wholly-owned subsidiary of the Company, with the stockholders of NeuroRx becoming stockholders of the Company.

Pursuant to the Merger Agreement, the aggregate consideration payable to the stockholders of NeuroRx at the effective time of the Merger (the "Effective Time") will equal 50,000,000 shares ("Closing Consideration") of the Company's common stock, par value $0.001 per share ("Company Common Stock"), plus the additional contingent right to receive the Earnout Shares and Earnout Cash (each as defined below). At the Effective Time, each outstanding share of NeuroRx common stock (including shares of NeuroRx common stock resulting from the conversion of NeuroRx preferred stock immediately prior to the Effective Time) will be converted into the right to receive a pro rata portion of the Closing Consideration and the contingent right to receive a pro rata portion of the Earnout Shares and Earnout Cash. Each option and warrant of NeuroRx that is outstanding and unexercised immediately prior to the Effective Time will be assumed by the Company and will represent the right to acquire an adjusted number of shares of the Company Common Stock at an adjusted exercise price, in each case, pursuant to the terms of the Merger Agreement.

As part of the aggregate consideration payable to NeuroRx's securityholders pursuant to the terms of the Merger Agreement, NeuroRx's securityholders (including option holders and warrant holders) who own NeuroRx securities immediately prior to the closing of the Transactions will have the contingent right to receive their pro rata portion of (i) an aggregate of 25,000,000 shares of the Company Common Stock ("Earnout Shares") if, prior to December 31, 2022, the NeuroRx COVID-19 Drug receives emergency use authorization by the Food and Drug Administration ("FDA") and NeuroRx submits and the FDA files for review a new drug application for the NeuroRx COVID-19 Drug (the occurrence of the foregoing, the "Earnout Shares Milestone"), and (ii) an aggregate of $100,000,000 in cash ("Earnout Cash") upon the earlier to occur of (x) FDA approval of the NeuroRx COVID-19 Drug and the listing of the NeuroRx COVID-19 Drug in the FDA's "Orange Book" and (y) FDA approval of the NeuroRx Antidepressant Drug Regimen and the listing of the NeuroRx Antidepressant Drug Regimen in the FDA's "Orange Book," in each case prior to December 31, 2022 (the occurrence of either of clauses (x) or (y), the "Earnout Cash Milestone").

On March 19, 2021, the Company entered into a second amendment ("Amendment") to the Merger Agreement with NeuroRx and Merger Sub. The Amendment extends the outside date by which the parties must consummate the Merger from April 23, 2021 to May 24, 2021.

The Merger Agreement contains customary representations, warranties and covenants by the parties thereto and the closing is subject to certain conditions as further described in the Merger Agreement.

Subscription Agreement

On March 12, 2021, the Company entered into subscription agreements ("Subscription Agreements") with certain qualified institutional buyers and institutional accredited investors (collectively, the "PIPE Investors"), pursuant to which the Company will, substantially concurrently with, and contingent upon, the consummation of the Merger, issue an aggregate of 1,000,000 shares of the Company Common Stock, par value $0.001 per share, to the PIPE Investors at a price of $10.00 per share, for aggregate gross proceeds to the Company of $10,000,000 (the "PIPE"). The closing of the PIPE is conditioned upon, among other things, (i) the substantially concurrent consummation of the Merger, (ii) the accuracy of all representations and warranties of the Company and the PIPE Investors in the Subscription Agreements, and the performance of all covenants of the Company and the PIPE Investors under the Subscription Agreements, (iii) the shares of the Company Common Stock shall have been approved for listing on the Nasdaq Capital Market, subject to official notice of issuance, and (iv) the Merger

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Agreement shall not have been terminated or rescinded, and no amendment, waiver or modification shall have occurred thereunder that would materially adversely affect the economic benefits that the PIPE Investor would reasonably expect to receive under the Subscription Agreement without having received the PIPE Investor's prior written consent (not to be unreasonably withheld, conditioned, or delayed).

Legal Proceedings

In connection with the proposed Merger with NeuroRx, a purported stockholder of the Company has filed a lawsuit and other purported stockholders have threatened to file lawsuits alleging breaches of fiduciary duty and violations of the disclosure requirements of the Exchange Act. The Company intends to defend the matters vigorously. These matters are in the early stages and the Company is currently unable to reasonably determine the outcome or estimate any potential losses, and, as such, has not recorded a loss contingency.

8. STOCKHOLDERS' EQUITY

Preferred Stock — The Company is authorized to issue 1,000,000 shares of preferred stock with a par value of $0.001 per share with such designation, rights and preferences as may be determined from time to time by the Company's Board of Directors. At March 31, 2021 and December 31, 2020, there were no shares of preferred stock issued or outstanding.

Common Stock — The Company is authorized to issue 100,000,000 shares of common stock with a par value of $0.001 per share. Holders of the Company's common stock are entitled to one vote for each share. At March 31, 2021 and December 31, 2020, there were 2,688,242 shares of common stock issued and outstanding.

Rights — Each holder of a right will receive one-tenth (1/10) of one share of common stock upon consummation of a Business Combination, even if the holder of such right redeemed all shares held by it in connection with a Business Combination. No fractional shares will be issued upon conversion of the rights. No additional consideration will be required to be paid by a holder of rights in order to receive its additional shares upon consummation of a Business Combination, as the consideration related thereto has been included in the Unit purchase price paid for by investors in the Initial Public Offering. If the Company enters into a definitive agreement for a Business Combination in which the Company will not be the surviving entity, the definitive agreement will provide for the holders of rights to receive the same per share consideration the holders of the common stock will receive in the transaction on an as-converted into common stock basis and each holder of a right will be required to affirmatively convert its rights in order to receive 1/10 share underlying each right (without paying additional consideration). The shares issuable upon conversion of the rights will be freely tradable (except to the extent held by affiliates of the Company).

If the Company is unable to complete a Business Combination within the Combination Period and the Company liquidates the funds held in the Trust Account, holders of rights will not receive any of such funds with respect to their rights, nor will they receive any distribution from the Company's assets held outside of the Trust Account with respect to such rights, and the rights will expire worthless. Further, there are no contractual penalties for failure to deliver securities to the holders of the rights upon consummation of a Business Combination. Additionally, in no event will the Company be required to net cash settle the rights. Accordingly, holders of the rights might not receive the shares of common stock underlying the rights.

Representative Shares

At the closing of the Initial Public Offering, the Company issued EarlyBirdCapital and its designees 120,000 Representative Shares. On November 29, 2017, the Company issued an additional 18,000 Representative Shares

for no consideration. The Company accounted for the Representative Shares as an expense of the Initial Public Offering resulting in a charge directly to stockholders' equity. The Company determined the fair value of Representative Shares to be $1,380,000 based upon the offering price of the Units of $10.00 per Unit. The underwriter has agreed not to transfer, assign or sell any such shares until the completion of a Business Combination. In addition, the underwriter and its designees have agreed (i) to waive their redemption rights with respect to such shares in connection with the completion of a Business Combination and (ii) to waive their rights to liquidating distributions from the Trust Account with respect to such shares if the Company fails to complete a Business Combination within the Combination Period.

Unit Purchase Option

On November 22, 2017, the Company sold to EarlyBirdCapital, for $100, an option to purchase up to 600,000 Units exercisable at $10.00 per Unit (or an aggregate exercise price of $6,000,000) commencing on the later of November 20, 2018 or the consummation of a Business Combination. The unit purchase option may be exercised for cash or on a cashless basis, at the holder's option, and expires five years from November 20, 2017. The Units issuable upon exercise of this option are identical to those offered in the Initial Public Offering. The Company accounted for the unit purchase option, inclusive of the receipt of $100 cash payment, as an expense of the Initial Public Offering resulting in a charge directly to stockholders' equity. The Company estimated the fair value of this unit purchase option to be $2,042,889 (or $3.40 per Unit) using the Black-Scholes option-pricing model. The fair value of the unit purchase option granted to the underwriters was estimated as of the date of grant using the following assumptions: (1) expected volatility of 35%, (2) risk-free interest rate of 2.05% and (3) expected life of five years. The option and such units purchased pursuant to the option, as well as the common stock underlying such units, the rights included in such units, the common stock that is issuable for the rights included in such units, the warrants included in such units, and the shares underlying such warrants, have been deemed compensation by FINRA and are therefore subject to a 180-day lock-up pursuant to Rule 5110(g)(1) of FINRA's NASDAQ Conduct Rules. Additionally, the option may not be sold, transferred, assigned, pledged or hypothecated for a one-year period (including the foregoing 180-day period) following the date of Initial Public Offering except to any underwriter and selected dealer participating in the Initial Public Offering and their bona fide officers or partners. The option grants to holders demand and "piggy back" rights for periods of five and seven years, respectively, from the effective date of the registration statement with respect to the registration under the Securities Act of the securities directly and indirectly issuable upon exercise of the option. The Company will bear all fees and expenses attendant to registering the securities, other than underwriting commissions which will be paid for by the holders themselves. The exercise price and number of units issuable upon exercise of the option may be adjusted in certain circumstances including in the event of a stock dividend, or the Company's recapitalization, reorganization, merger or consolidation. However, the option will not be adjusted for issuances of common stock at a price below its exercise price.

9. WARRANT LIABILITY

Public Warrants may only be exercised for a whole number of shares. No fractional shares will be issued upon exercise of the Public Warrants. The Public Warrants will become exercisable on the later of the completion of a Business Combination and November 22, 2018; provided in that the Company has an effective registration statement under the Securities Act covering the shares of common stock issuable upon exercise of the Public Warrants and a current prospectus relating to them is available. The Company has agreed that as soon as practicable, the Company will use its best efforts to file with the SEC a registration statement for the registration, under the Securities Act, of the shares of common stock issuable upon exercise of the Public Warrants. The Company will use its best efforts to cause the same to become effective and to maintain the effectiveness of such

registration statement, and a current prospectus relating thereto, until the expiration of the Public Warrants in accordance with the provisions of the warrant agreement. Notwithstanding the foregoing, if a registration statement covering the shares of common stock issuable upon exercise of the Public Warrants is not effective 90 days following the consummation of Business Combination, warrant holders may, until such time as there is an effective registration statement and during any period when the Company shall have failed to maintain an effective registration statement, exercise warrants on a cashless basis pursuant to the exemption provided by Section 3(a)(9) of the Securities Act, provided that such exemption is available. If that exemption, or another exemption, is not available, holders will not be able to exercise their warrants on a cashless basis. The Public Warrants will expire five years after the completion of a Business Combination or earlier upon redemption or liquidation.

The Company may redeem the Public Warrants:

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

If the Company calls the Public Warrants for redemption, management will have the option to require all holders that wish to exercise the Public Warrants to do so on a "cashless basis," as described in the warrant agreement.

The exercise price and number of shares of common stock issuable upon exercise of the warrants may be adjusted in certain circumstances including in the event of a stock dividend, or recapitalization, reorganization, merger or consolidation. However, the warrants will not be adjusted for issuance of common stock at a price below its exercise price. Additionally, in no event will the Company be required to net cash settle the warrants. If the Company is unable to complete a Business Combination within the Combination Period and the Company liquidates the funds held in the Trust Account, holders of warrants will not receive any of such funds with respect to their warrants, nor will they receive any distribution from the Company's assets held outside of the Trust Account with the respect to such warrants. Accordingly, the warrants may expire worthless.

10. FAIR VALUE MEASUREMENTS

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.

BIG ROCK PARTNERS ACQUISITION CORP.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
MARCH 31, 2021
(Unaudited)

The following table presents information about the Company's assets that are measured at fair value on a recurring basis at March 31, 2021 and December 31, 2020, and indicates the fair value hierarchy of the valuation inputs the Company utilized to determine such fair value:

Description	Level	March 31, 2021	December 31, 2020
Assets:			
Marketable securities held in Trust Account	1	$5,968,035	$ 5,967,947
Liabilities:			
Warrant liability — Placement Warrants	3	$1,313,324	$ 655,098

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

The significant unobservable 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, 2021	December 31, 2020
Stock price	$ 35.42	$ 24.50
Strike price	$ 11.50	$ 11.50
Term (in years)	5.0	5.0
Volatility	25.0%	25.0%
Risk-free rate	0.9%	0.4%
Dividend yield	0.0%	0.0%
Fair value of private warrants	9.64	4.81

The following table provides a summary of the changes in fair value of the Company's Level 3 financial instruments that are measured at fair value on a recurring basis:

	Placement
Fair value as of January 1, 2021	$ 655,098
Change in valuation inputs or other assumptions	658,226
Fair value as of March 31, 2021	$ 1,313,324

There were no transfers in or out of Level 3 from other levels in the fair value hierarchy.

11. SUBSEQUENT EVENTS

The Company evaluates subsequent events and transactions that occur after the balance sheet date up to the date that the condensed financial statements were issued. Based upon this review, the Company did not identify any subsequent events that would have required adjustment or disclosure in the condensed financial statements.

Part II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table indicates the expenses to be incurred in connection with the offering described in this registration statement, other than underwriting discounts and commissions.

	Amount
Securities and Exchange Commission registration fee	$15,593
Accountants' fees and expenses	*
Legal fees and expenses	*
Blue Sky fees and expenses	*
Transfer Agent's fees and expenses	*
Printing and engraving expenses	*
Miscellaneous	*
Total expenses	$ *

* These fees are calculated based on the securities offered and the number of issuances and accordingly cannot be defined at this time.

Item 14. Indemnification of Directors and Officers.

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

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

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

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

Item 15. Recent Sales of Unregistered Securities

In connection with the Merger, on March 12, 2021 BRPA entered into subscription agreements ("Subscription Agreements") with certain qualified institutional buyers and institutional accredited investors (collectively, the "Investors"). Pursuant to the Subscription Agreements, on May 24, 2021, substantially concurrently with the completion of the Merger, we issued an aggregate of 1,000,000 shares of Common Stock to the Investors at a price of $10.00 per share, for aggregate gross proceeds to us of $10,000,000. Such shares of Common Stock were offered and sold in a private placement pursuant to an exemption from registration under Section 4(a)(2) of the Securities Act.

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits

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

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

Exhibit		Incorporated by Reference Exhibit		
		Form	Exhibit	Filing Date
10.28	Amendment #2 to Manufacturing Supply Agreement, dated as of November 5, 2020, by and among NeuroRx, Nephron SC, Inc. and Nephron Pharmaceutical Corporation	S-4	10.40	05/21/21
10.29	Amendment #3 to Manufacturing Supply Agreement, dated as of February 5, 2021, by and among NeuroRx, Nephron SC, Inc. and Nephron Pharmaceutical Corporation	S-4	10.41	05/21/21
10.30	Share Subscription Facility Agreement, dated as of October 18, 2019, among NeuroRx, GEM Global Yield LLC SCS and GEM Yield Bahamas Limited	S-4	10.42	05/21/21
10.31	Common Stock Purchase Warrant dated March 28, 2021	S-4	10.43	05/21/21
10.32	Clinical Trial Participation Agreement, dated as of December 17, 2020, by and between Quantum Leap Health Care Collaborative and NeuroRx	S-4	10.44	05/21/21
10.33	Consulting Agreement with Randolph Guggenheimer III	8-K	10.33	05/28/21
10.34	Voting Agreement by and between Jonathan Javitt and Daniel Javitt	8-K	10.34	05/28/21
23.1	Consent of Marcum LLP			*
23.2	Consent of KPMG LLP			*
23.4	Consent of Paul, Weiss, Rifkind, Wharton & Garrison LLP (included in Exhibit 5.1)			*
24.1	Power of Attorney (included on signature page of this Form S-1)			*
101.INS	XBRL Instance Document			*
101.SCH	XBRL Taxonomy Extension Schema Document			*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document			*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document			*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document			*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document			*

* Filed herewith.

(b) Financial Statement Schedules. Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes required by the underwriter to permit prompt delivery to each purchaser.

(a) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission (the "Commission") pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

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

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

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

(5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the

following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(h) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a

director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Wilmington, State of Delaware, on this 6th day of July, 2021.

NRX PHARMACEUTICALS, INC.

By: /s/ Jonathan C. Javitt
Jonathan C. Javitt
Chief Executive Officer and Chairman

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

SIGNATURES

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

Signature	Title	Date
/s/ Jonathan C. Javitt Jonathan C. Javitt	Chief Executive Officer and Chairman (principal executive officer)	July 6, 2021
/s/ William Fricker William Fricker	Chief Financial Officer (principal financial officer and principal accounting officer)	July 6, 2021
/s/ Sherry A. Glied Sherry A. Glied	Director	July 6, 2021
/s/ Patrick J. Flynn Patrick J. Flynn	Director	July 6, 2021
/s/ Daniel Troy Daniel Troy	Director	July 6, 2021
/s/ Aaron Gorovitz Aaron Gorovitz	Director	July 6, 2021
/s/ Chaim Hurvitz Chaim Hurvitz	Director	July 6, 2021
/s/ H.R. McMaster H.R. McMaster	Director	July 6, 2021

Exhibit 5.1

Paul, Weiss, Rifkind, Wharton & Garrison LLP
1285 Avenue of the Americas
New York, NY 10019-6064

(212) 373-3000

(212) 757-3990

July 6, 2021

NRx Pharmaceuticals, Inc.
1201 North Market Street, Suite 111
Wilmington, Delaware 19801

Re: NRx Pharmaceuticals, Inc. Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as special counsel to NRx Pharmaceuticals, Inc., a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-1 (the "Registration Statement") of the Company, filed with the Securities and Exchange Commission pursuant to the Securities Act of 1933, as amended (the "Securities Act"), and the rules and regulations thereunder (the "Rules"). You have asked us to furnish our opinion as to the legality of the securities being registered under the Registration Statement. The Registration Statement relates to (i) the possible sale by certain stockholders of the Company identified in the Registration Statement (the "Selling Securityholders") of an aggregate of up to 8,757,258 shares (the "Selling Securityholder Shares") of common stock, par value $0.001 per share (the "Common Stock") and (ii) the issuance by the Company of up to 3,586,250 shares of Common Stock that are issuable upon the exercise of warrants to purchase shares of Common Stock (the "Warrant Shares" and, together with the Selling Securityholder Shares, the "Shares"), in each case in the manner specified in the Registration Statement.

The Company was formed as Big Rock Partners Acquisition Corp., a Delaware corporation ("BRPA"), which, on May 24, 2021, consummated the merger of its wholly-owned subsidiary with and into NeuroRx, Inc., a Delaware corporation ("NeuroRx"), pursuant to the Agreement and Plan of Merger, dated as of December 13, 2020, among BRPA, NeuroRx and certain other parties thereto, as amended by the First Amendment to Agreement and Plan of Merger, dated January 27, 2021, and as further amended by the Second Amendment to Agreement and Plan of Merger, dated March 19, 2021 (as amended or supplemented from time to time, the "Merger Agreement") (the merger contemplated by the Merger Agreement, the "Merger"). In connection with the closing of the Merger, BRPA changed its name to NRx Pharmaceuticals, Inc.

In connection with the furnishing of this opinion, we have examined originals, or copies certified or otherwise identified to our satisfaction, of the following documents (collectively, the "Documents"):

1. the Registration Statement; and

2. the Warrant Agreement, dated as of November 20, 2017 (the "Warrant Agreement").

In addition, we have examined (i) such corporate records of the Company as we have considered appropriate, including a copy of the certificate of incorporation, as amended, and by-laws, as amended, of the Company, certified by the Company as in effect on the date of this letter and (ii) such other certificates, agreements and documents as we deemed relevant and necessary as a basis for the opinions expressed below. We have also relied upon the factual matters contained in the representations and warranties of the Company made in the Documents and upon certificates of public officials and the officers of the Company.

In our examination of the documents referred to above, we have assumed, without independent investigation, the genuineness of all signatures, the legal capacity of all individuals who have executed any of the documents reviewed by us, the authenticity of all documents submitted to us as originals, the conformity to the originals of all documents submitted to us as certified, photostatic, reproduced or conformed copies of valid existing agreements or other documents, the authenticity of all the latter documents and that the statements regarding matters of fact in the certificates, records, agreements, instruments and documents that we have examined are accurate and complete.

Based upon the foregoing, and subject to the qualifications, assumptions and limitations stated herein, we are of the opinion that (i) the Selling Securityholder Shares have been validly issued and are fully paid and non-assessable and (ii) the Warrant Shares, when issued upon exercise of, and upon payment and delivery in accordance with the Warrant Agreement, will be validly issued, fully paid and non-assessable.

The opinion expressed above is limited to the laws of the State of New York and the General Corporation Law of the State of Delaware. Our opinion is rendered only with respect to the laws, and the rules, regulations and orders under those laws, that are currently in effect.

We hereby consent to use of this opinion as an exhibit to the Registration Statement and to the use of our name under the heading "Legal Matters" contained in the prospectus included in the Registration Statement. In giving this consent, we do not thereby admit that we come within the category of persons whose consent is required by the Securities Act or the Rules.

Very truly yours,

/s/ Paul, Weiss, Rifkind, Wharton & Garrison LLP

PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP

Exhibit 23.1

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the inclusion in this Registration Statement of NRx Pharmaceuticals, Inc. on Form S-1 of our report dated April 1, 2021, except for the effects of the restatement discussed in Note 2 as to which the date is May 11, 2021, with respect to our audits of the financial statements of Big Rock Partners Acquisition Corp. as of December 31, 2020 and 2019 and for each of the two years in the period ended December 31, 2020, which report appears in the prospectus, which is part of this Registration Statement. We also consent to the reference to our Firm under the heading "Experts" in such prospectus.

/s/ Marcum LLP

Marcum LLP
San Francisco, CA
July 6, 2021

Exhibit 23.2

Consent of Independent Registered Public Accounting Firm

We consent to the use of our report dated May 11, 2021, with respect to the consolidated financial statements of NeuroRx, Inc., included herein and to the reference to our firm under the heading "Experts" in the prospectus.

/s/ KPMG LLP

Short Hills, New Jersey

July 6, 2021