**Risk Factors Comparison 2024-03-29 to 2023-03-31 Form: 10-K**

**Legend:** **New Text** ~~Removed Text~~ Unchanged Text Moved Text Section

We are an early- stage company with a history of losses and our business faces significant risks and uncertainties, which are summarized below and are more fully described in the following section. Our business, prospects, financial condition, and results of operations could be materially and adversely affected if one or more of these risks occurs. In addition, other events that we do not currently anticipate, or that we currently deem immaterial, may also affect our business, prospects, financial condition and results of operations. Accordingly, in evaluating our business, we encourage you to consider the following discussion of risk factors, in its entirety, in addition to other information contained in or incorporated by reference into this annual report and our other public filings with the SEC. The following summary of the Risk Factors is subject to the full description of the Risk Factors set forth in this Item 1A. Risk Factors Summary • We have a limited operating history upon which to base an investment decision. **• 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 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 as a going concern or complete our product development. • NRX- 101 is **still Phase 2 / 3** in clinical testing and we cannot predict with any certainty if or when we might submit an NDA for regulatory approval. • We have not yet scaled manufacturing of our drug products to levels that are required for sustained sales. • The **outcome of any current or future** ~~Company has been, and may become involved in,~~ disputes, claims, arbitration and litigation **could have a material adverse effect on our business, financial condition and results of operations** . • If we fail to obtain or maintain FDA and other regulatory clearances for our products, or if such clearances are delayed, we will be unable to commercially distribute and market our products in the U. S. • Our products will face significant competition in the markets for such products and future products may never achieve market acceptance. We are faced with rapid technological change and developments by competitors may render our products or technologies obsolete or non- competitive. • **Global** ~~We are currently operating in a period of~~ economic ~~uncertainty and capital markets disruption~~ , ~~which has been significantly impacted by geopolitical~~ -- **political and social conditions, armed** ~~instability due to the ongoing military conflict~~ **conflicts** ~~between Russia~~ and ~~Ukraine~~ **uncertainties in the market that we serve may adversely impact our business** . • Our relationships with **potential** customers and payors will be subject to applicable anti- kickback, fraud and abuse, transparency, and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, and administrative burdens. • Managing our growth as we expand operations may strain our resources **and we may not successfully manage our growth** . • Failure to achieve and maintain effective internal controls over financial reporting in accordance with Section 404 of 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. • Even if a drug product is approved, the regulators may impose limitations on the use or marketing of such product. • If we are unable to design, conduct and complete clinical trials successfully, our drug candidates will not be able to receive regulatory approval. We cannot predict whether regulatory agencies will determine that the data from our clinical trials of our product candidates supports marketing approval. • There is no guarantee that regulators 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** . • If an adverse event occurs during a clinical trial, the regulators or an internal review board may delay or terminate the trial. • Discussions and guidance of clinical trials are not binding obligations on the part of regulatory authorities. 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. • 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. • 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 market restrictions or withdrawals. • 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 use** ~~If the Company pursues development~~ of **a controlled substance in** our NRX- 100 drug candidate ~~, the use of a controlled substance~~ subjects us to DEA scrutiny and compliance, which may result in additional expense and clinical delays ~~, and may generate controversy. In addition, the use of controlled substances may limit the availability of the active ingredients needed for NRX- 100~~ . • Modifications to our products may require new NDA approvals and some of our other product candidates will require Risk Evaluation and Mitigation Strategies. • Our business relies on certain licensing rights that can be terminated in certain circumstances. • Our business depends upon securing and protecting critical intellectual property. 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 development or sale of our products, and / or pay damages. • Breaches by our employees or other parties may allow our trade secrets to become known to our competitors. • 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 do not have direct control of third parties performing preclinical and clinical trials. If such third parties do not perform as contractually required or expected, we may not be able to obtain regulatory approval for or commercialize our products. • We have no manufacturing capabilities and depend on other parties for manufacturing operations. These manufacturers may fail to satisfy our requirements and applicable regulatory requirements. • 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. Future sales, or the perception of sales, of our Common Stock by us or our existing stockholders could cause the market price for our Common Stock to decline. • We qualify as a " smaller reporting company " within the meaning of the Securities Act, which could make our securities less attractive to investors and may make it more difficult to evaluate our performance. • 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. • Certain of our stockholders have effective control of NRx, and their interests may conflict with NRx' s or yours in the future. We are no longer a " controlled company " under the corporate governance rules of Nasdaq. However, we continue to rely on certain exceptions from corporate governance standards. • If we fail to meet the applicable continued listing requirements of ~~NASDAQ Global~~ **the Nasdaq Capital** Market, ~~NASDAQ~~ **Nasdaq** may delist our common stock, in which case the liquidity and market price of our common stock could decline. • We do not intend to pay **cash** dividends on our Common Stock for the foreseeable future. ~~46Risks~~ **47Risks** Related to an Early- Stage CompanyWe 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 $ ~~93~~ **30** . ~~1~~ **2** million and $ 39. 8 million for the years ended, December 31, ~~2021~~ **2023** , and 2022, respectively. 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 future sales and marketing efforts. These investments may not result in revenue or growth in our business. In addition, as a newly- public company, we 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 U. S. 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 (" CMC ") that meet governmental regulatory standards; • the degree of acceptance and differentiation 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; ~~47~~ **48** • 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; • changes in accounting rules and tax laws; and • global geopolitical conditions. 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 and we may not be able to continue as a going concern. 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 $ ~~20~~ **4** . ~~1~~ **6** million as of December 31, ~~2022, and the Company raised an additional $ 2. 9 million, before fees and other costs, through an offering in March~~ 2023. However, we will need to continue to seek capital from time to time to continue the development and potential commercialization of our product candidates, including any expansion of our clinical programs to facilitate a larger safety database for the use of NRX- 101 as a chronic, or chronic- intermittent, treatment as advised by FDA in our recent Type B meeting, and to acquire and develop other product candidates. Accordingly, we believe that we will need to raise substantial additional capital to fund our continuing operations and the development and potential commercialization of our product candidates during calendar year ~~2023~~ **2024** . We may raise capital through future share offerings, 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 ~~48in~~ **in** preferred depression treatment. If we experience unanticipated ~~cash~~ **49cash** requirements, we may need to seek additional sources of financing, which may not be available on favorable terms, if at all. 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 and 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 be unable to continue as a going concern. 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. 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. 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. We will have broad discretion in using the proceeds of shares sold to investors, and we may not spend the proceeds in an effective manner. We are not limited in the use of proceeds of shares sold to investors. 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. ~~49Risks~~ **50Risks** Related to Our Business and IndustryNRX- 101 is still in Phase ~~II~~ **2** / ~~III~~ **3** of clinical testing. NRX- 101 is in Phase ~~IIb~~ **2b** / ~~III~~ **3** of clinical testing with Breakthrough Therapy designation, a Biomarker Letter 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~~ **2I** study program, which tests the safety and efficacy of the drug candidate on a large sample of patients. We are conducting a new registrational study of NRX- 101 for severe bipolar depression in patients with ASIB after initial stabilization with NRX- 100 (ketamine). We are using newly- manufactured material that was manufactured using the expected commercial process. In addition, we have initiated a Phase ~~II~~ **2** clinical study for bipolar depression with sub- acute suicidal ideation and behavior. This population is significantly larger than the Bipolar Depression population with ASIB, and does not require initial stabilization with NRX- 100. On January 3, 2023, the Company announced that its first clinical trial site had been contracted for a Phase ~~3~~ **II / III** clinical trial of NRX- 101 for the treatment of Severe Bipolar Depression in patients with Acute Suicidal Ideation and Behavior, a potentially lethal condition that currently takes the lives of thousands of Americans each year. Because NRX- 101 is a Breakthrough Therapy, we anticipate being able to file a New Drug Application (" NDA ") based upon a single, successful Phase ~~III~~ **2I** trial. 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 on a rolling basis for the regulatory approval and commercialization of NRX- 101 in the U. S. in ~~2023~~ **2024** . Our product candidates are newly- formulated and we have not yet scaled manufacturing to levels that will be required for sustained sales. NRX- 101 has been formulated under cGMP and long- term stability (i. e., five years) has been achieved for our solid dose formulation of NRX- 101. Although the Company completed a Type C meeting in which FDA agreed to the Company' s Chemical Manufacturing Control and stability program

for drug manufacture, and production of ~~NRx~~ **NRX** - 101 has been transferred to a commercial scale cGMP manufacturing facility in South Carolina, we have yet to attempt large scale manufacturing. The outcome of any current or future disputes, claims, arbitration and litigation could have a material adverse effect on our business, financial condition and results of operations. We **may, in the future, be involved in one or more lawsuits, claims or other proceedings. These suits could concern issues including contract disputes, employment actions, employee benefits, taxes, environmental, health and safety, fraud and abuse, personal injury and product liability matters. We** are ~~currently involved~~ in **litigation** ~~a dispute~~ with ~~GEM Yield Bahamas Limited and GEM Global Yield LLC SCS (collectively~~ **a former employee of the Company regarding their termination of their employment. While the Company will vigorously defended the claims asserted in this matter** , **the litigation is ongoing and we may be subject to other lawsuits, claims, or proceedings. See** " ~~GEM~~ **Item 3. Legal Proceedings** " ~~). On August 12, 2022, the Company received a demand~~ for ~~arbitration (the " Demand ") from GEM. The Demand claims that the Company' s subsidiary, NeuroRx, Inc. (" NeuroRx "), failed to satisfy its obligation to pay GEM~~ a **full** ~~commitment fee in the amount of HK $ 15, 000, 000 (approximately US $ [ 1, 914, 087 ] at current exchange rates) pursuant to a Share Subscription~~ **description** ~~Facility Agreement, executed on October 18, 2019, by and among NeuroRx and GEM. NeuroRx expects to vigorously defend its position that payment~~ of **such proceedings** ~~the commitment fee is neither due nor owing under the terms of the Agreement. In the event of an adverse ruling, there can be no assurance that we would not be required to pay damages in an amount that may have a material adverse effect on our business, financial condition or results of operations~~ . If we fail to obtain or maintain FDA and other regulatory 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 national regulators around in the world, and by the FDA in the U. S. 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 in the U. S. and may be forced to focus on international markets where we currently do not have a presence or an established partnership, which will limit the revenue potential of our products. ~~50In~~ **51In** the U. S., the FDA permits commercial distribution of a new drug product only after the product has received approval of an NDA filed with the FDA, seeking permission to market the product in interstate commerce in the U. S. 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. **We are subject to certain contractual obligations and limitations on our ability to consummate future financings under the Share Purchase Agreement (as defined below) and the Note issued by us to Streeterville on November 4, 2022, as amended in March 2023, July 2023, and February 2024. Pursuant to the securities purchase agreement we entered into in connection with the issuance of the Note to Streeterville, dated as of November 14, 2022 (the " Share Purchase Agreement ") by and between us and Streeterville, we are subject to certain restrictions on our ability to issue securities during the term of the Note. Specifically, we have agreed, among other things, to obtain Streeterville' s consent prior to issuing any debt securities or certain equity securities where the pricing of such equity securities is tied to the public trading price of our common stock and to refrain from entering into any agreement or covenant that locks up, restricts or otherwise prohibits us from entering into a variable rate transaction with Streeterville or any of its affiliates, or from issuing common stock or other equity or debt securities to Streeterville or any of its affiliates. If we are unable to obtain Streeterville' s consent prior to issuing any debt or certain equity securities, including as related to this offering of common stock, such issuance may be a breach of the Share Purchase Agreement, and Streeterville may be obligated to indemnify Streeterville for loss or damage arising as a result of any breach or alleged breach by us of the Share Purchase Agreement, which may affect our business operations and financial condition. Furthermore, we also must offer Streeterville the right to purchase up to 10 % of future equity and debt securities offerings, subject to certain exceptions and limitations, during the term of the Note (the " Participation Right "). If we are unable to obtain Streeterville' s consent prior to issuing any debt securities or certain equity securities, we may be obligated to pay to Streeterville in liquidated damages an amount equal to 20 % of the amount Streeterville would have been entitled to invest under the Participation Right. In addition, we have agreed to make certain monthly redemption payments at the request of the Lender.** Our **failure to pay such redemptions, when due, may result in defaults under our agreements with the Lender. If we are in default with respect to our obligations under the Note, the Lender may consider the Note immediately due and payable and may elect to substantially increase the interest rate of the Note. We may not have the required funds to pay the required note redemptions and such redemptions, or penalties in connection therewith, may have an adverse effect on our cash flows, results of operations, and ability to pay our other debts as they come due. 52Our** revenue stream will depend upon third- party reimbursement. Once our product candidates are cleared or approved by the regulatory authorities, 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 national regulatory authorities as safe and efficacious. Many patients using existing approved therapies are generally reimbursed all or part of the product cost by governmental and non- governmental insurance plans. Such 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 are not aware of any material commercial conflicts that could delay or prevent development or commercialization. However, commercial conflicts such as the interpretation of contractual obligations, payments for services, development obligations or the ownership of intellectual property could arise in any joint development activity. 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. ~~51Our~~ -- **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 product 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 & Johnson, Pfizer, Eli Lilly, Sage Therapeutics, Axsome, and Relmada, among others. ~~We~~ **53We** 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 regulatory approval in any jurisdiction, 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. The failure of any of our products to significantly penetrate current or new markets would negatively impact our business, financial condition and results of operations. ~~52To~~ **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 medical societies and / or 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~~ **54We** 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 entails 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 may not be able to obtain Hatch- Waxman Act marketing exclusivity or equivalent regulatory data exclusivity protection in other jurisdictions for our products. Should we not obtain or fail to maintain patent protection on our products, we intend to rely, in part, on Hatch- Waxman exclusivity for the commercialization of our products in the U. S. The Hatch- Waxman Act provides marketing exclusivity to the first applicant to gain approval of an NDA under specific provisions of the Federal Food, Drug, and Cosmetic Act (" FFDCA ") for a product using an active ingredient that the FDA has not previously approved (i. e., five years) or for a new dosage form, route or indication (i. e., 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. ~~53In~~ **In** the future, we may undertake international operations, which would subject us to risks inherent with operations outside of the U. S. Although we do not have any foreign manufacturing or distribution operations at this time, we may seek to obtain market clearances in foreign markets that we deem could 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 would 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 would 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~~ **55If** 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 could face ~~further~~ disruption due to ~~the COVID- 19 pandemic~~ **pandemics and other public health emergencies** . We ~~are continuing to~~ monitor ~~the latest developments regarding the COVID- 19 pandemic~~ **pandemics** ~~on our business, operations~~ and **other public health emergencies** ~~financial condition and results,~~ and have made certain assumptions regarding ~~the~~ **their** ~~pandemic~~ **potential impact on our business, operations and financial condition and results** 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~~ **pandemics and other public health emergencies** on our business, operations and financial condition and results ~~due to the uncertainty of future developments~~ . If ~~there is~~ a **new** ~~resurgence of the COVID- 19~~ pandemic **and public health emergency arises** , 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 **any** ~~the COVID- 19~~ pandemic to the global economy

and to us **will** ~~continue to~~ be 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 response** to ~~control a resurgence~~ **public health emergencies in any** of **our targeted markets may have a material and adverse effect on our business operations and results of operations. Prior concerns about potential business disruption from** the COVID- 19 pandemic ~~or~~ **are no longer relevant to** ~~other~~ -- **the Company' s** ~~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 the COVID- 19 pandemic has already impacted our business, operations and financial condition and results, see our historical consolidated financial statements, presented elsewhere in this annual report. 54Global~~ -- **Global** economic, political and social conditions, armed conflicts and uncertainties in the market that we serve may adversely impact our business. Our performance depends on the financial health and strength of our **potential** 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 U. S., 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 trade disputes and tariffs between countries with whom we are engaged may impact the cost of raw materials, finished products or components used in our products and our ability to sell our products in various markets. **In addition, the consequences of the ongoing conflict between Russia and Ukraine, including related sanctions and countermeasures, and the effects of rising global inflation, are difficult to predict, and could adversely affect our business and operations.** 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. ~~Our~~ **56Our** business, financial condition, and results of operations may be materially adversely affected by the negative impact on the global economy and capital markets resulting from new international conflicts or any other geopolitical tensions. U. S. and global markets generally experience volatility and disruption as a result of geopolitical tensions and military conflicts, including significant volatility in commodity prices, credit and capital markets, as well as supply chain disruptions. Additionally, international sanctions and other penalties can disrupt payment systems and imports / exports and lead to instability and lack of liquidity in capital markets, potentially making it more difficult for us to obtain additional funds. Any such disruptions may also magnify the impact of other risks described in this annual report. We may not be successful in hiring and retaining key employees and contractors. 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, including our Chief Executive Officer. If he terminates his relationship with us, such a departure could 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 U. S., 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 ~~55information~~ -- **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 and Anti- Corruption Policy, 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~~ **57Our** relationships with **potential** 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, **and** administrative burdens. 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 Foreign Corrupt Practices Act (" FCPA "), which prohibits, among other things, 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 Office of Foreign Assets Control, which prohibits, among other things, transactions or dealings with specified countries, their governments, and in certain circumstances, their nationals, and with individuals and entities that are specially designated, including narcotics traffickers and terrorists or terrorist organization; • the Committee on Foreign Investment in the U. S., which has regulatory oversight over the sources and amounts of investment we may accept from non- US investors; • 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 (" HIPAA "), as amended by the Health ~~56Information --~~ **Information** Technology for Economic and Clinical Health Act of 2009 (" HITECH "), 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 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~~ **58Managing** 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. ~~57Developments --~~ **Developments** by competitors may render our products or technologies obsolete or non- competitive. Alternative technologies and products are being developed to treat depression and some may target suicidal bipolar depression and post- traumatic stress disorder (" PTSD "). Many of the 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~~ **59Cyber** 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~~ **Since the** COVID- 19 pandemic **,** ~~has forced~~ many of our employees ~~to~~ **have** ~~shift~~ **shifted** 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 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 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. ~~58If~~ **If** we are unable to establish and maintain appropriate internal financial reporting controls and procedures, in accordance with Section 404 of the Sarbanes- Oxley Act, it could impact our operating results, result in material misstatements in our consolidated financial statements and cause us to fail to meet our reporting obligations on a timely basis. 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 may be required to attest to the effectiveness of our internal control over financial reporting on an annual basis in the future. 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~~ **60Risks** Related to Clinical and Regulatory MattersIf 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 regulators consider safe for humans and effective for indicated uses we are studying. Regulators 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 regulatory 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 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. Even if a drug product is approved, the regulators may impose limitations on the use or marketing of such product. Even if our product candidates receive regulatory approval from regulators, they 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. Regulators may also require us or our collaborators to commit to perform lengthy Phase IV 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 regulatory 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. ~~59After~~ -- **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 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 regulators 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; **61** • mandated modifications to promotional material or issuance of corrective information; • product seizure or detention, or refusal to permit the import or export of products; and • 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 regulatory approval for any of our drug candidates, we must submit an NDA or request for EUA 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 I clinical programs may not support moving a drug candidate to Phase ~~II~~ **2** or Phase ~~III~~ **2I** clinical trials. Phase ~~III~~ **2I** 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 ~~III~~ **2I** 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: ~~60~~ • 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~~ **62We** 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 regulators 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 U. S. or in Europe, we cannot predict whether the agencies will agree with our analysis and approve our applications. There is no guarantee that regulatory authorities 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 initiated a Phase ~~IIb~~ **2b** / ~~III~~ **3** clinical research program of NRX- 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 the 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~~ **2** 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. If this statistically- significant advantage is replicated in the current Phase ~~III~~ **2I** clinical trial, under the terms agreed to with the FDA in our Special Protocol Agreement, we aim to submit a NDA to the FDA ~~[~~on a rolling basis ~~]~~for the regulatory approval and commercialization of NRX- 101 in the U. S. in ~~2023~~ **2024** . We cannot assure investors that the FDA or any other regulator will approve or clear 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. ~~61The~~ -- **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 regulatory 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 the 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 ~~regulatory~~ **63regulatory** clearance to market that product in the applicable countries 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 regulatory 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: • finding suitable clinical sites; • 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 or by 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 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 ~~62candidates~~ -- **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. ~~We~~ **64We** 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 and follow- 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. Pandemic or pandemic- like conditions may limit the ability of patients to participate in studies. 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. Regulators may require us to submit data on a greater number of patients than we originally anticipated and / or for a longer follow- 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 regulatory authority requirements, our clinical trial requires the approval of the institutional review board (“ 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 a regulatory authority. 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 regulatory authority 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 regulators. There can be no assurance that the data generated using modified protocols will be acceptable to the regulators or that if future modifications during the trial are necessary, any such modifications will be acceptable to regulators. If the regulators believe that prior approval is required for a particular modification, they can delay or halt a clinical trial while they evaluate additional information regarding the change. If an adverse event occurs during a clinical trial, the regulators or an IRB may delay (clinical hold) 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 regulators 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 regulators or an IRB could delay or ~~63halt~~ -- **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~~ **65Any** 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 **. Our NRX- 101 clinical trial is against a strong active ingredient as opposed to a placebo** . 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 (“ QSR ”), and International Standards Organization (“ 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~~ **66In** 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 ~~64events~~ -- **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 U. S. 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 (“ 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 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, 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; **67** • 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; and • 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 ~~65diversion~~ -- **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 be 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 for this drug product. 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~~ **2b** / ~~III~~ **3** development program for NRX- 101 after stabilization with NRX- 100, 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~~ **68negative** publicity and media stories in an effort to persuade the medical community to reject these products. Political pressures and adverse publicity could lead to additional regulatory hurdles, delays in, increased expenses for, and limit or restrict the introduction and marketing of, our product candidates. ~~66We~~ **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 therapies, NRX- 101 has 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 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. 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 or a company with a focus in multiple therapeutic areas including depression. Some of our products for clinical trials may be manufactured outside the U. S. Currently, our new clinical trial supplies for NRX- 101 are being manufactured in the U. S., though some supplies are sourced from outside the U. S. Switching or adding manufacturing capability outside the U. S. 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. 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~~ **69strict** 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 ~~67result~~ -- **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. **If we fail to comply with environmental, health, and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business. We are subject to numerous environmental, health, and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations will involve the use of hazardous materials, including chemicals and biological materials. Our operations also may produce hazardous waste products. We generally anticipate contracting with third parties for the disposal of these materials and wastes. We will not be able to eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from any use by us of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties for failure to comply with such laws and regulations. Although we maintain workers' compensation insurance to cover us for costs and expenses, we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. In addition, we may incur substantial costs in order to comply with current or future environmental, health, and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Our failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.** ~~Risks~~ **70Risks** Related to Intellectual PropertyOur 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 Development and License Agreement, as amended, between Glytech LLC (“ Glytech ”) and NeuroRx (the “ Glytech DLA ”) and the Exclusive License Agreement, dated as of April 16, 2019, by and between NeuroRx and Sarah Herzog Memorial Hospital Ezrat Nashim. 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 us 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 us. We may not succeed at in- licensing drug candidates or technologies to expand our product pipeline. We may not be able to successfully in- 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 U. S. 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 ~~68competitive~~ **competitive** advantages, or may be challenged and invalidated by third parties; and, we may not develop additional proprietary technologies that are patentable. ~~As~~ **71As** 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. **We may be involved in lawsuits to protect or enforce our patents or the patents of our licensors, which could be expensive, time- consuming and unsuccessful and could result in a finding that such patents are unenforceable or invalid. Competitors may infringe our patents or the patents of our licensors. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time- consuming. In addition, in an infringement proceeding, a court may decide that one or more of our patents is not valid, is unenforceable or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. In patent litigation in the U. S., defendant counterclaims alleging invalidity and / or unenforceability are commonplace, and there are numerous grounds upon which a third party can assert invalidity or unenforceability of a patent. Third parties may also raise similar claims before administrative bodies in the U. S. or abroad, even outside the context of litigation. These types of mechanisms include re- examination, post- grant review, inter partes review, interference proceedings, derivation proceedings, and equivalent proceedings in foreign jurisdictions**

**(e. g., opposition proceedings). These types of proceedings could result in revocation or amendment to our patents such that they no longer cover our product candidates. The outcome for any particular patent following legal assertions of invalidity and unenforceability is unpredictable. With respect to the validity question, for example, we cannot be certain that there is no invalidating prior art, of which we, our patent counsel and the patent examiner were unaware during prosecution.** If **a defendant were to prevail on a legal assertion of invalidity and / or unenforceability, or if we are otherwise unable to adequately protect our rights, we would lose at least part, and perhaps all, of the patent protection on our product candidates. Defense of these types of claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from our business. 72Conversely, we may choose to challenge the patentability of claims in a third party' s U. S. patent by requesting that the USPTO review the patent claims in re- examination, post- grant review, inter partes review, interference proceedings, derivation proceedings, and equivalent proceedings in foreign jurisdictions (e. g., opposition proceedings), or we may choose to challenge a third party' s patent in patent opposition proceedings in the Canadian Intellectual Property Office (" CIPO ") the European Patent Office (" EPO ") or another foreign patent office. Even if successful, the costs of these opposition proceedings could be substantial, and may consume our time or other resources. If we fail to obtain a favorable result at the USPTO, CIPO, EPO or other patent office then we may be exposed to litigation by a third party alleging that the patent may be infringed by our product candidates or proprietary technologies. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, that perception could have a substantial adverse effect on the price of our Common Stock. Any of the foregoing could have a material adverse effect on our business financial condition, results of operations and prospects. We have limited foreign intellectual property rights and may not be able to protect our intellectual property rights throughout the world. We currently have limited intellectual property rights outside the U. S. Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the U. S. can be less extensive than those in the U. S. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the U. S. For example, patents covering therapeutic methods of treating humans are not available in many foreign countries. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the U. S., or from selling or importing products made using our inventions in and into the U. S. or other jurisdictions. Competitors may use our technologies in jurisdictions where we do not have or have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but where enforcement is not as strong as that in the U. S. These products may compete with our product candidates in jurisdictions where we do not have any issued patents and our patent claims or other intellectual property rights may not be effective or sufficient to prevent them from competing. Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal and political systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets and other intellectual property protection, particularly those relating to biopharmaceutical products, which could make it difficult for us to stop the infringement of our patents or marketing of competing products against third parties in violation of our proprietary rights generally. The initiation of proceedings by third parties to challenge the scope or validity of our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could be impossible or impractical due to sanctions or trade disputes between countries, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license. 73If** 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~~ **guarantee** that we will secure the right to commercialize our patents. A patent is a limited exclusionary 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 exclusionary right 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 ~~69the --~~ **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 U. S., we may need to rely on the 3- year Hatch- Waxman Act marketing exclusivity, the six- month pediatric exclusivity, any approved 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 obtain Hatch- 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~~ **74Risks** Related to Our Reliance on Third PartiesWe 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 be 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 ~~70we~~ **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~~ **75We** must enter into agreements with, and depend upon, one or more partners to assist us in commercializing our product candidates. Our ability to commercialize depends upon our 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 fulfill 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. ~~71Upon~~ -- **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. **We have entered into a partnership and collaboration agreement with Alvogen (as defined below) for the commercialization of NRX- 101.** If we decide to commercialize **NRX- 101, notwithstanding these agreements, or** any **future** ~~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 ~~StockOur~~ **Stock76Our** 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. From time to time in the future, we may 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 the " Description of Capital Stock " ~~section of~~ **filed as an exhibit to** this annual report. 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 ~~72these~~ -- **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 NRx 2021 Omnibus Incentive Plan (the " Incentive Plan ") are 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 of the Exchange Act, as applicable. The original number of shares reserved for future issuance under the Incentive Plan was 5, 373, 394. In addition, the Incentive Plan includes an evergreen feature that will allow our Board, 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. 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. Further, sales of Common Stock or warrants upon expiration of any applicable lockup periods could encourage short sales of our Common Stock or 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 our Common Stock or warrants could have a tendency to depress the price of our Common Stock or warrants, respectively, which could increase the potential for short sales. ~~We~~ **77We** cannot predict the size of future issuances of our Common Stock or warrants or the effect, if any, that future issuances and sales of shares of our Common Stock or warrants will have on the market price of our Common Stock or warrants. Sales of substantial amounts of Common Stock, or the perception that such sales could occur, may adversely affect prevailing market prices of our Common Stock or warrants. We qualify 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 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 a " smaller reporting company " as defined in Item 10 (f) (1) of Regulation S- K. Smaller reporting companies may take advantage of certain reduced disclosure obligations, including, among other things, providing only two (2) 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 our 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 DGCL contain provisions that could have the effect of rendering more difficult, delaying, or preventing an acquisition deemed undesirable by our Board. Among other things, the Charter and / or the Bylaws include the following provisions: ~~73~~ • a staggered board, which means that our Board 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; • 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 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~~ **78Any** provision of the Charter, the Bylaws or DGCL 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 of the State of Delaware (the " Chancery Court ") (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 U. S. 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 U. S. 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, ~~74the~~ -- **the** Charter and the Bylaws will provide that the federal district courts of the U. S. 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 have effective control of NRx, and their interests may conflict with NRx' s or yours in the future. Jonathan Javitt and Daniel Javitt beneficially own approximately 20. 2 % and 13. 4 % 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 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 influence the composition of our Board and could preclude any unsolicited acquisition of NRx. 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 and ultimately might affect the market price of Common Stock. 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 substantial influence over NRx, 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~~ **79respective** affiliates, have a direct or indirect material interest is included in this annual report. For more information, see " Certain Relationships and Related Party Transactions " section of this annual report. 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 Company operates based on Jonathan Javitt' s prior employment contract and current consulting contract with us and the Glytech DLA, 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 operates. Jonathan Javitt and Daniel Javitt 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 are no longer a " controlled company " under the corporate governance rules of Nasdaq. However, we continue to rely on an exception in the listing requirements to allow a non- independent director to sit on the Nominating and Governance Committee. Previously, Jonathan Javitt and Daniel Javitt controlled the votes of the majority of our Common Stock. As a result, we were a " controlled company " for purposes of the Nasdaq corporate governance rules and were exempt from certain governance requirements otherwise required by Nasdaq, including requirements 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. We are no longer a " controlled company " under the corporate governance rules of Nasdaq. Under the Nasdaq listing requirements, a company that ceases to be a " controlled company " must comply with the independent board committee ~~75requirements~~ -- **requirements** as they relate to the nominating and corporate governance. ~~However~~ **Previously** , **Jonathan Javitt** ~~we continue to rely on Rule 5605 (e) (3), which permits that one director, who is not an~~ **and** ~~independent director and is not currently an executive officer~~ **Daniel Javitt controlled the votes of the majority of** ~~or~~ **our** ~~employee of the~~ **Common Stock. As a result, we were a " controlled** ~~Company~~ **company " for purposes of** ~~, may be appointed to~~ the ~~nominating and~~ **Nasdaq corporate** governance **rules** ~~committee if the board, under exceptional~~ and **were exempt from certain governance requirements otherwise** ~~limited circumstances, determines that such individual' s membership on the committee is~~ required by **Nasdaq** ~~the best interests of the Company and its Shareholders. Jonathan Javitt~~ , **including requirements that we have a** ~~who is not an independent director, continues to serve on the Company' s~~ nominating and corporate governance committee ~~because the Board has determined~~ that ~~his~~ - **is composed entirely** ~~unique experience and qualifications as a scientist and a co- founder~~ of **independent directors with a written charter addressing** the ~~Company~~ **committee' s purpose and responsibilities. We** are ~~beneficial to the~~ **no longer a " controlled** ~~Company~~ **company " under** ~~. Until we are fully subject to~~ the **corporate governance rules of Nasdaq. Under the Nasdaq** listing requirements, **a** ~~however, our stockholders will not have the same protections afforded to stockholders of companies~~ **company** that **ceases** ~~are subject~~ to ~~all of~~ **be a " controlled company " must comply with the independent board committee requirements as** ~~the~~ **they relate to the nominating and** corporate governance **. The Company is now subject to all the** requirements of Nasdaq. **Our common stock may become the target of a " short squeeze ". In recent years, the securities of several companies have increasingly experienced significant and extreme volatility in stock price due to short sellers of common stock and buy- and- hold decisions of longer investors, resulting in what is sometimes described as a " short squeeze. " Short squeezes have caused extreme volatility in those companies and in the market and have led to the price per share of those companies to trade at a significantly inflated rate that is disconnected from the underlying value of the company. Sharp rises in a company' s stock price may force traders in a short position to buy the shares to avoid even greater losses. Many investors who have purchased shares in those companies at an inflated rate face the risk of losing a significant portion of their original investment as the price per share has declined steadily as interest in those shares have abated. We may be a target of a short squeeze, and investors may lose a significant portion or all of their investment if they purchase our shares at a rate that is significantly disconnected from our underlying value.** ~~General~~ **80General** Risk FactorsOur 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 a resurgence 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 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 U. S. 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. Securities litigation could have a substantial cost and divert resources and the attention of executive management from our business regardless of the outcome of such litigation. ~~76If~~ **81If** 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 and maintain 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, 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. ~~77In~~ **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. 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~~ **82controls** over financial reporting in accordance with Section 404 of 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. " If we fail to meet the applicable continued listing requirements of ~~NASDAQ Global~~ **the Nasdaq Capital** Market, ~~NASDAQ~~ **Nasdaq** may delist our ~~common~~ **Common** ~~stock~~ **Stock** , in which case the liquidity and market price of our ~~common~~ **Common** ~~stock~~ **Stock**

could decline. Our ~~common~~ **Common** ~~stock~~ **Stock** is currently listed on the ~~NASDAQ Global~~ **Nasdaq Capital** Market. In order to maintain that listing, we must satisfy certain continued listing requirements. ~~including the requirement that our Common Stock maintain an average minimum bid price of $ 1. 00. Since March 1, 2023, the closing sale price of our Common Stock as reported on Nasdaq has been less than $ 1. 00.~~ In the past, we have received ~~a~~ deficiency ~~letter~~ **letters** from Nasdaq for failing to maintain ~~a minimum bid price of $ 1. 00, but we have since regained~~ compliance **with such** ~~. If we are deficient in maintaining the necessary~~ listing requirements **. For example , on July 20, 2023, we received a written notification from the Staff indicating that we were not in compliance with Nasdaq Listing Rule 5450 (b) (2) (A) because we had not maintained a minimum MVLS of $ 50, 000, 000 for the previous 33 consecutive business days. We were provided an initial compliance period of 180 calendar days,** ~~our~~ **or** ~~common~~ **until January 22, 2024, to regain compliance with the minimum MVLS requirement. Additionally, on April 18, 2023, we received a written notification from the Staff indicating we were not in compliance with Nasdaq Listing Rule 5450 (a) (1), and were provided an initial compliance period of 180 calendar days, or until October 16, 2023, to regain compliance. On October 17, 2023, we received a written notification from the Staff indicating that based upon our non- compliance with Nasdaq Listing Rule 5450 (a) (1), our securities were subject to delisting unless we timely requested a hearing before the Panel, which such hearing was timely requested and subsequently held on January 4, 2024. On January 16, 2024, the Panel granted our request for an exception to the Nasdaq Listing Rules until April 16, 2024, to demonstrate compliance with the Minimum Bid Price Requirement, subject to our filing all necessary documentation required to transfer our listing from the Nasdaq Global Market to the Nasdaq Capital Market on or before January 19, 2024, and our demonstrating compliance with the Minimum Bid Price Requirement on or before April 16, 2024. On February 1, 2024, the Nasdaq** ~~stock~~ **Stock** ~~may be delisted~~ **Market informed us that it had approved our application to transfer our listing to the Nasdaq Capital Market. Our securities were transferred from the Nasdaq Global Market to the Nasdaq Capital Market at the opening of business on January 19, 2024** . If our **Common** ~~stock~~ **Stock** is delisted, an active trading market for our ~~common~~ **Common** ~~stock~~ **Stock** may not be sustained and the market price of our ~~common~~ **Common** ~~stock~~ **Stock** could decline **. Delisting of our Common Stock could adversely affect our ability to raise additional capital through the public or private sale of equity securities, would significantly affect the ability of investors to trade our securities and would negatively affect the value and liquidity of our Common Stock. Delisting could also have other negative results, including the potential loss of confidence by employees, the loss of institutional investor interest and fewer business development opportunities** . Market price of our Common Stock may be volatile, which could subject us to securities class action litigation and result in substantial losses for our stockholders. The market price of shares of our Common Stock could be subject to wide fluctuations in response to many risk factors listed in this section and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus as well as other factors others beyond our control. Furthermore, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations as well as general economic, political and market conditions, such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of shares of our Common Stock. In addition, such fluctuations could subject us to securities class action litigation, which could result in substantial costs and divert our management' s attention from other business concerns, which could potentially harm our business. As a result of this volatility, our stockholders may not be able to sell their shares of our Common Stock at or above the price at which they purchased their shares of our Common Stock. **83** ~~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 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 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. 78~~