

# NRx Pharmaceuticals, Inc.

*Q4 about inline. Phase 3 trial positive data. Major new opportunities in Chronic Pain, UTI, and IV ketamine. Lowering P/T to \$50.*

**Q4 inline:** NRx recently (on April 1) reported its Q4 2023 (ending December) results. Net loss was \$4.3 million or EPS of \$(0.53) compared with our estimates of \$(0.76) and consensus of \$(0.80). There was no company guidance. NRx is a clinical stage drug development company so it generates no revenue.

**Operating expenses:** Operating expenses were \$4.4 million, down from Q3's \$5.8 million on lower G&A and clinical trial activities.

**No guidance:** Management did not provide forward guidance.

**Adjusting estimate:** We are adjusting our 2024 EPS estimate to \$(2.18) from \$(3.22).

**Focused on Bipolar Disorder:** Its main drug is NRX-101 (D-cylcoserine/Lurasidone) for the treatment of bipolar depression in patients with suicidality (the risk of suicide). NRX-101 aims to be the first oral therapeutic for the treatment of Bipolar Depression in patients with Acute Suicidal Ideation and Behavior ("ASIB") and Sub-Acute Suicidal Ideation and Behavior ("SSIB").

**NRX-101:** NRX-101 is a dual-targeted therapy regimen consisting of an initial treatment with NRX-100 (intravenous ketamine) followed by 6-week treatment with NRX-101 (combined DCS and lurasidone). Ketamine is a generic drug and has been widely used for a long time as an antidepressant, although its effect does not last long (usually about a week). NRX-101 is designed to extend ketamine's proven anti-suicidal and antidepressant benefits without its drawbacks.

**Large market potential:** There is no medicine approved to treat patients with bipolar depression suffering suicidal ideation. According to the NIH, an estimated 2.8% of the U.S. adult population had bipolar disorder in the past 12 months, and the lifetime prevalence is 4.4% of adults in the U.S. Lifetime suicide behavior occurs in 25% to 56% of people with bipolar depression.

**Positive clinical trials data:** In April, the company just announced positive clinical trials data in its Phase 2b/3 Clinical Trial of NRX-101 vs. Lurasidone for Treatment of Suicidal Bipolar Depression. NRX-101 vs lurasidone demonstrated a promising, though not yet statistically significant 33% reduction in suicidality together with a 70% reduction (P=.076) reduction in symptoms of akathisia – a side effect of antidepressants that is closely linked to suicide and considered a medical emergency. The study met the study's original promising zone criteria and, if sustained in a registration trial of 300 or more patients, should be powered to yield a statistically significant result.

**Major partnership deal:** In June 2023, the company announced a major partnership with Alvogen Pharmaceuticals and Lotus Pharmaceuticals for global development and commercialization of NRX-101 in suicidal bipolar depression with the potential for up to \$330 million in milestones and double-digit royalties.

**Chronic Pain and UTI IND:** NRx plans to investigate NRX-101 in Chronic Pain and UTI as additional indications. The company has filed an Investigational New Drug (IND) Application with the FDA for these new indications and has received approvals.

**IV ketamine:** The company is developing NRX-100 (intravenous ketamine) as a labeled drug to treat acute depression and suicidality based on recent data cooperation agreements and on changes in the regulatory environment.

**Balance sheet:** As of Q4, the company has \$5 million in cash and \$9 million in debt. In Q1 (just completed) and the current Q2, the company has received an advance from Alvogen of \$5 million and raised \$4.5 million selling stock. We believe NRx has enough cash into late-2024 or longer due to its Alvogen deal.

**Reverse stock split:** In April 2024, the company effected a 1:10 reverse stock split.

**Current valuation attractive:** We are maintaining our BUY rating, but lowering our 12-month price target to \$50 from \$55 based on a NPV analysis. This represents significant upside from the current share price and we believe this valuation appropriately balances out the high risks with large upside opportunities.

## Company Description

NRx Pharmaceuticals, based in Wilmington, DE, is a clinical stage biopharmaceutical company developing drugs to treat mental health disorders.

## COMPANY UPDATE

Rating: **BUY**

Ticker: NRXP

Price: \$2.10

Target: \$50  
(from \$55)

## Stock Data

Exchange:	NasdaqGM
52-week Range:	1.90 – 12.00
Shares Outstanding (million):	10
Market cap (\$million):	\$21
EV (\$million):	\$25
Debt (\$million):	\$9
Cash (\$million):	\$5
Avg. Daily Trading Vol. (\$million):	\$1
Float (million shares):	7
Short Interest (million shares):	1
Dividend, annual (yield):	\$0 (NA%)

## Revenues (US\$ million)

	<u>2024E</u> <u>(Cur.)</u>	<u>2024E</u> <u>(Old)</u>	<u>2025E</u> <u>(Cur.)</u>	<u>2025E</u> <u>(Old)</u>
Q1 Mar	0E		0E	
Q2 Jun	0E		0E	
Q3 Sep	0E		0E	
Q4 Dec	0E		0E	
Total	0E		0E	
EV/Revs	N/A		N/A	

## Earnings per Share (pro forma)

	<u>2024E</u> <u>(Cur.)</u>	<u>2024E</u> <u>(Old)</u>	<u>2025E</u> <u>(Cur.)</u>	<u>2025E</u> <u>(Old)</u>
Q1 Mar	(0.55)E	(0.81)E	(0.53)E	
Q2 Jun	(0.55)E	(0.81)E	(0.53)E	
Q3 Sep	(0.54)E	(0.80)E	(0.52)E	
Q4 Dec	<u>(0.54)E</u>	<u>(0.80)E</u>	<u>(0.52)E</u>	
Total	<b>(2.18)E</b>	<b>(3.22)E</b>	<b>(2.10)E</b>	
P/E	N/A		N/A	

\*Reflects a 1:10 reverse stock split in April 2024.

## Important Disclosures

Ascendant Capital Markets LLC seeks to do business with companies covered by its research team. Consequently, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making an investment decision.

**For analyst certification and other important disclosures, refer to the Disclosure Section, located at the end of this report, beginning on page 19.**

Exhibit 1: NRx Pharmaceuticals, Inc. Corporate Overview



NRx Stock News: Multiple Buy Ratings at \$2 - \$5.50

- 4 Near-term shots on goal
- Potential \$100 million revenue starting in 2024
- Planned near-term spin offs with Royalty Trust
- Restructuring of debt facility with reduced payments through 2023
- Recent insider purchases
- Preferred stock purchases by long-term shareholders to limit short term dilution
- 1 of 4 indications is already partnered for \$330 million in milestones plus ~15% royalty

Source: Company reports.

Exhibit 2: NRx's Investment Summary

Investment Thesis – Four Multi-Billion Markets with Near-term Catalysts

 <p><b>Suicidal Depression</b></p> <p><b>KetCo, Inc.: NRX-100 (IV Ketamine)</b></p> <ul style="list-style-type: none"> <li>• Planned spin-out</li> <li>• Term-sheet in hand</li> <li>• 3.5 million patients with acute suicidality</li> <li>• New, compelling clinical trial data</li> <li>• Only alternative is ECT</li> <li>• Failure of nasal ketamine to demonstrate benefit</li> <li>• Company to apply for accelerated approval in 2024 based on existing data</li> <li>• \$3.5 billion market @ \$1,000/dose</li> </ul>	 <p><b>Suicidal Bipolar Depression</b></p> <p><b>NRX-101 Partnered with Alvogen</b></p> <ul style="list-style-type: none"> <li>• Ph 2b/3 study nearing complete enrollment; data January 2024</li> <li>• TRBD: 1 million patients</li> <li>• \$330 million in potential milestones plus 15% royalty</li> <li>• \$10 million milestone on successful readout &amp; FDA comment</li> <li>• Recent report of 94% data concordance</li> <li>• Alvogen pays costs beyond readout</li> </ul>	 <p><b>Chronic Pain</b></p> <p><b>NRX-101 Chronic Pain</b></p> <ul style="list-style-type: none"> <li>• IND Open</li> <li>• \$70 Billion Market</li> <li>• Extensive non-clinical data and US patent</li> <li>• Successful phase 2a trial with DCS</li> <li>• Awaiting readout of DOD-funded 200-person DCS trial</li> <li>• Non-opioid, non-addictive</li> <li>• Potentially decreases Opioid Craving</li> <li>• Submitted for HEAL funding (NIH)</li> </ul>	 <p><b>Complicated UTI</b></p> <p><b>NRX-101: cUTI</b></p> <ul style="list-style-type: none"> <li>• 3 million cases/yr</li> <li>• 90% of organisms are resistant to common antibiotics</li> <li>• DCS is highly concentrated in the urine</li> <li>• IND submitted</li> <li>• Eligible for FDA Qualified Infectious Disease Product (QIDP)</li> <li>• 5 year additional exclusivity; Priority Review</li> <li>• &gt;\$10 billion market at branded prices</li> <li>• Planning spin-out</li> </ul>
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Source: Company reports.

Exhibit 3: NRX-101

## NRX-101

The first oral, non-addictive medicine in development to treat Bipolar Depression in Patients with ASIB\* and SSIB\*\*



\*ASIB - requiring hospitalization  
\*\*SSIB - not requiring hospitalization

## NRX-101™ For Suicidal Treatment-Resistant Bipolar Depression

First oral medicine in development for Suicidal Treatment-Resistant Bipolar Depression

- Non-addictive
- Non-neurotoxic
- Non-hallucinogenic

NRX-101 blocks the psychedelic effects of NMDA antagonists with evidence that the antidepressant and anti-suicidal properties can be preserved

Source: Company reports.

Exhibit 4: NRx's Product Pipeline

NRx R&D Pipeline: Multi-Billion Dollar Potential in Psychiatry and Chronic Pain

Indication	Compound	Preclinical	Phase 1	Phase 2	Phase 3	Status	
<b><u>Suicidal Depression</u></b>							
Depression with Acute Suicidality	NRX-100 (IV ketamine)	NDA Filing anticipated H1 2024					
Severe Bipolar Depression with Recently Suicidal Patients post stabilization	NRX-101™	Currently Enrolling Phase 2b/3				Partnered with Alvogen, Inc. and Lotus Pharma	
Treatment of Suicidal Treatment-Resistant Bipolar Depression	NRX-101™	300+ expected to be enrolled by Q2 2024 <sup>ack</sup>					
Expanded Access / Safety Study	NRX-101™						
<b><u>Chronic Pain</u></b>							
Chronic Pain	DCS	200 Person independent DOD trial pending readout				Commercial IND Now Cleared	
<b><u>Post Traumatic Stress Disorder (PTSD)</u></b>							
PTSD in patients with Depression	NRX-101™	Non-clinical evidence, Clinical Planning					
<b><u>Complicated Urinary Tract Infection</u></b>							
	NRX-101™	In Vitro Data, Applying for FDA QIDP November 2023				7	

Source: Company reports.

**Exhibit 5: Targeting Suicidal Bipolar Depression Risks**

**Why target Suicidal Bipolar Depression?**

Suicide kills ~50,000 Americans annually\* - suicide is particularly high in bipolar disorder

**Selected Unmet Needs for New Antidepressants**

**EFFICACY**

- Higher % responders
- Faster Onset

WARNING: INCREASED MORTALITY IN ELDERLY PATIENTS WITH DEMENTIA-RELATED PSYCHOSIS; and SUICIDAL THOUGHTS AND BEHAVIORS

**SAFETY/ TOLERABILITY**

- Decrease or no increase in Suicidality
- Lower Side Effects

Source: Company reports.

**Exhibit 6: Bipolar Depression Suicide Market Opportunities**

**NRX-101 Market Opportunity in Bipolar Depression**

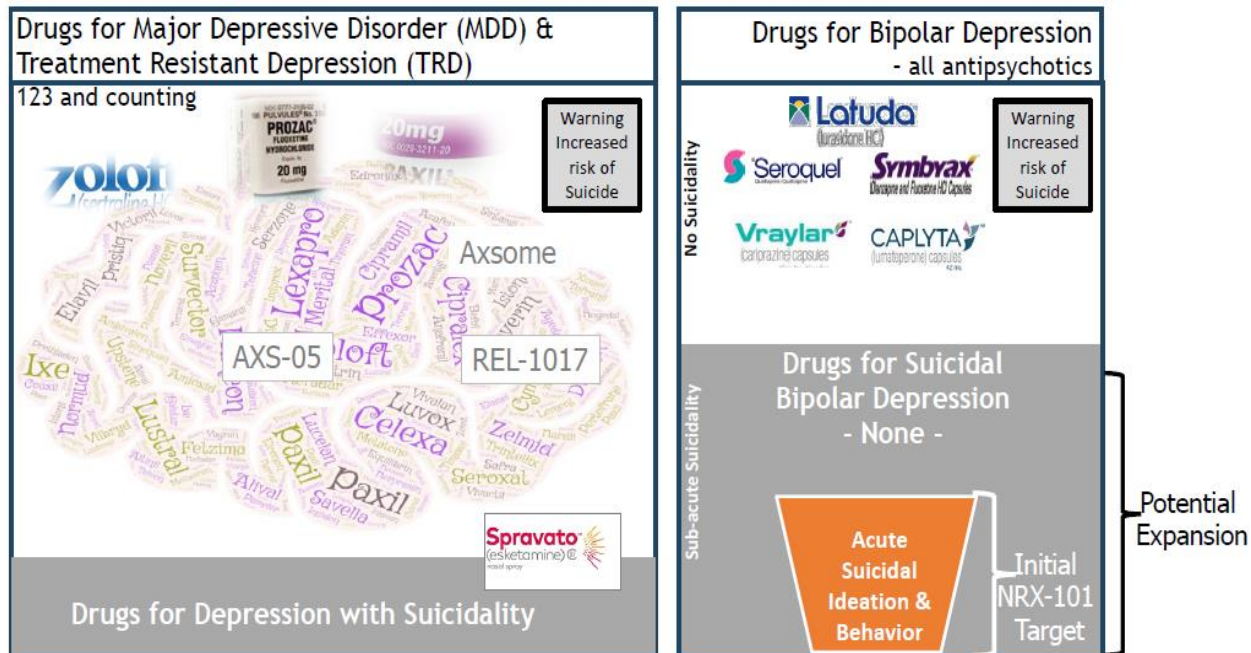
Patients in clinics and outpatient being treated for Bipolar Depression with Suicidality



Source: Company reports.

**Exhibit 7: Unmet Need for Bipolar Depression Suicidality**

Though numerous drugs have been approved for MDD and Bipolar Depression, faster, more robust response, and reduction of suicidality remain the unmet need



Source: Company reports.

**Exhibit 8: Science of Depression and Suicidality**

**The Emerging Science of Depression and Suicidality**

**Depression and Suicidity – though overlapping is not the same**

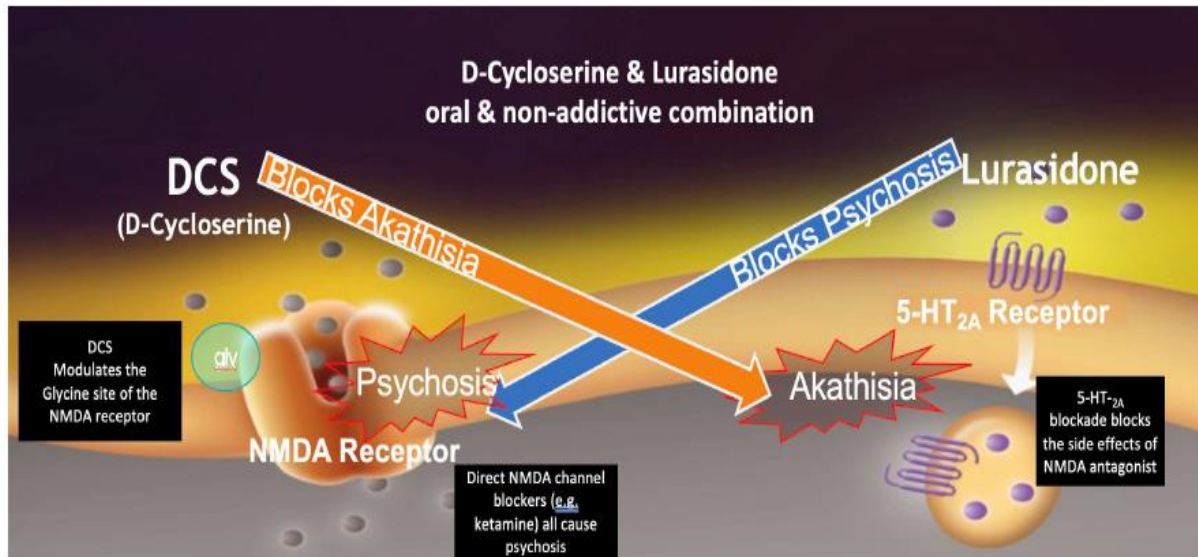
Depression with Suicidity	Implications for Bipolar Depression with Suicidity
<ul style="list-style-type: none"> <li>Antidepressants (5HT2a / SSRIs) can increase suicidity – suicidity routinely an exclusion in depression studies</li> <li>NMDA antagonists (ketamine) can stabilize depression and suicidity –               <ul style="list-style-type: none"> <li>Suicidity improvement not strictly a function of improvements in depression</li> <li>Ketamine can create hallucinations, may be highly addictive, requires supervised administration</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Highest suicidity of depressive disorders ~ 50% attempt suicide</li> <li>Available drugs improve depression but can increase suicidity</li> <li>Drug abuse and overdose of great concern – addictive agents may require REMS</li> </ul>
<p><b>Development of Depression drugs has mostly avoided addressing Suicidity</b></p>	

Source: Company reports.

Exhibit 9: NRx Discovery

The NRx Discovery

Simultaneous Blockade of NMDA and 5-HT<sub>2A</sub>



**D-Cycloserine acts as an NMDA antagonist above certain dosages**

Studies have shown that DCS + 5HT2a increases the antidepressant response and reduces suicidality

**Understanding the NMDA Receptor**

The NMDA receptor is an ION Channel on the surface of Brain Cells

At high levels of NMDA activity (i.e. the channel is wide open) thoughts are slowed substantially, patients ruminate on negative, frequently suicidal thoughts. Brain cells stop making new connections to neighboring cells.

NMDA antagonists decrease symptoms of depression.

NMDA antagonists block the akathisia caused by SSRI antidepressants in nonclinical studies.

NMDA antagonists “rewire” the brain by stimulating new connections between brain cells.

**NMDA RECEPTOR REGULATES SPEED OF THOUGHTS**

**TOO FAST** and thoughts race uncontrollably (mania)  
**TOO SLOW** and negative, self-destructive thoughts drive suicide

**TURNING A DIMMER**

Daily oral NRx-101 (a proprietary formulation of D-cycloserine and Lurasidone) modulates NMDA receptors at the glycine site.

**FLIPPING THE SWITCH**

A single infusion of injected Ketamine by pump initiates therapy; Blocks brain NMDA receptors at the “channel” site.

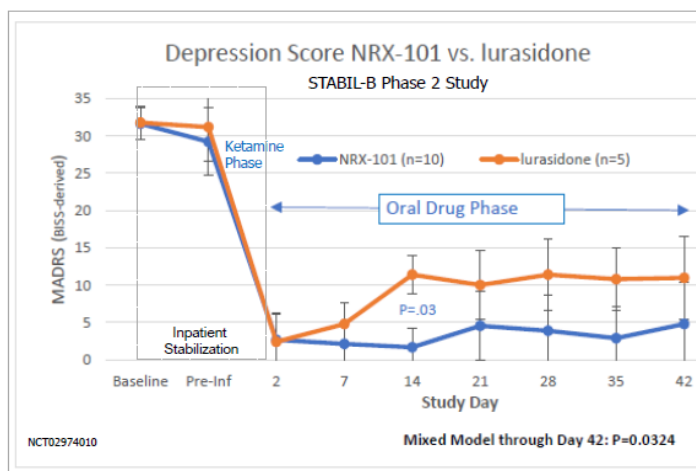
Source: Company reports.

## Exhibit 10: Phase 2 Study of D-Cycloserine in Depression / Suicidality Conclusions

### Phase 2 Study showed effect of D-Cycloserine in Depression / Suicidality

If Phase 2 results are replicated in Phase 3, this will meet criteria for FDA approval

- Primary endpoint is mean MADRS score over 42 days
- A clinically and statistically significant difference ( $p=.03$ ) was seen on the mixed model through day 42. The mean 7.7 point difference on MADRS is similar to or larger than that seen with Esketamine
- 40% relapse in control group, no relapse in NRX-101 group
- Patients who would otherwise have been in the hospital for 1 week plus were discharged after 1-2 days



Source: Company reports.

## Exhibit 11: Current NRX-101 Clinical Trial Program (SSIB & ASIB)

### Clinical Trial Progress: NRX-101 in Bipolar Depression

- **NRX-101 vs. Lurasidone in Suicidal Bipolar Depression**
  - Enrollment near completion; will continue enrolling to increase power
    - Enrollment broadened to national platform via 1-N-Health & Science 37
  - **Compliance** with assigned medication is tracking above 90%, as reported by our Contract Research Organization, which exceeds expectation for a CNS study
  - **Concordance** of site administered depression ratings (MADRS) evaluations with our internal "master raters" are tracking above 94%; exceeds that reported in the peer-reviewed literature
  - DSMB meeting demonstrated non-futility in March 2023
  - *Following a successful readout & FDA comment, Alvogen will assume further development costs*

Source: Company reports.



**Exhibit 12: NRX-101 Advantages and Objectives**

**NRX-101 offers a differentiated profile for Suicidal Bipolar Depression with an FDA agreed upon path to NDA**

Phase 3 with FDA Breakthrough Therapy designation

**NMDA – A Validated Mechanism**

- Depression & Suicidality
- Esketamine, NRX-101 Phase 2, etc.

**FDA Agreed Upon Regulatory Path**

- Special Protocol Agreement, Breakthrough Therapy designation: Treatment of Severe Bipolar Depression in Patients with ASIB after initial stabilization with ketamine or other effective therapy

**Addresses High Unmet Need**

- Treats depression and suicidality (bipolar space)
- Oral, not addictive (not scheduled), avoids hallucinations
- Outpatient

**Efficient Clinical Development Path to NDA**

- Seeking to replicate P2 study
- NRX-100 (144 pts.) NRX-101 (~80 pts.) pivotal study (severely depressed and acutely suicidal) to start 2H22
- Path to NDA filing in 2023

Path to NDA

**Composition of Matter Patent**

- NRx has a composition of matter patent for NRX-101 and an array of NMDA+5HT2A compounds,
- Five patent families, 60+ applications, 30+ issued patents

Exploring expansion in earlier population

- NRX-101 Phase 2 trial (Bipolar Depression in sub-acute suicidality) initiated 2Q 2022

Source: Company reports.

**Exhibit 13: NRX-101 Market Opportunities**

**Bipolar Depression is the tip of the NMDA iceberg**

**Treatment-resistant Suicidal Bipolar Depression:**

Unmet medical need; ongoing phase 2b/3 clinical trial. Granted Breakthrough Therapy Designation.

**Non-suicidal bipolar depression**

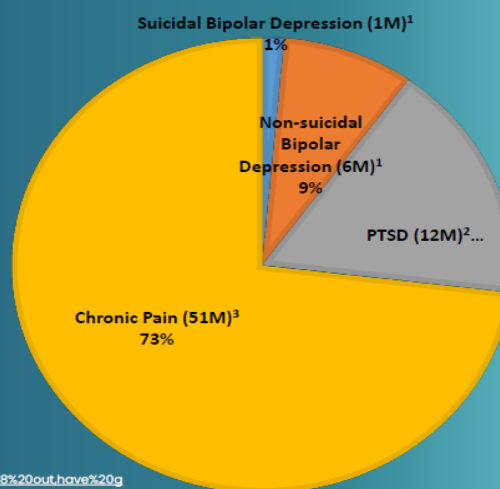
Currently treated with atypical antipsychotics. All have black box suicide warning on the label

**Chronic Pain**

Global Opiate Crisis. Evidence of relief with off-label ketamine. Encouraging early data with cycloserine

**PTSD**

Two indicated SSRI drugs. Neither relieves PTSD Symptoms. Both have suicide warnings on label



Sources:

1. National Institute of Mental Health, <https://www.nimh.nih.gov/health/statistics/bipolar-disorder>
2. US Dept of Veteran Affairs, [https://www.ptsd.va.gov/understand/common/common\\_adults.asp#:~:text=About%20%20or%20%20out.have%20gone%20through%20a%20trauma](https://www.ptsd.va.gov/understand/common/common_adults.asp#:~:text=About%20%20or%20%20out.have%20gone%20through%20a%20trauma)

Source: Company reports.

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Exhibit 14: Commercial Partnership with Alvogen

## Commercial Partnership with Alvogen

- **Alvogen, Alvogen US, Lotus Pharma: Outstanding Global Partner**
  - NRX-101 in Suicidal Bipolar Depression; right of first negotiation in other fields
  - Established global R&D, manufacturing and commercial operations
    - Almatica in the US: CNS focused division of Alvogen
    - Lotus in Europe/Asia/Pacific
  - Founded by Robert Wessman (Actavis)
- **Financial Terms**
  - Up to \$330 million in milestones, based on clinical/regulatory/sales progress
    - First \$10 million upon delivery of positive data from ongoing trial and Type B FDA meeting minutes
  - Double digit royalties that escalate to the mid-teens on Net Sales by Alvogen
  - Alvogen responsible for substantially all development, regulatory and commercial costs in this indication, after payment of initial milestone



Source: Company reports.

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Exhibit 15: NRX-101 DSMB and FDA recommendations (as of April 2023)

**Phase 2b/3 Trial for Suicidal Treatment-Resistant Bipolar Depression**

**The DSMB recommended that enrollment in the trial continue**

- The DSMB has reviewed unblinded interim data from the trial
- The Board found no futility signal at this stage of the trial; the failure to identify futility requires that an advantage, though not yet a statistically significant advantage, be seen
- Similarly, no safety signals were identified in association with NRX-101
- The DSMB will continue to monitor safety and efficacy in the trial
- ***Trial has been upgraded to a Phase 2b/3 study that may be used for a registrational filing should safety and efficacy be documented***

**FDA Approval Roadmap – Integrated Phase 2b/3 for Suicidal Treatment-Resistant Bipolar Depression (1)**

Given the guidance from FDA regarding a broader indication, the company plans further discussion with FDA on this pathway in a Breakthrough Therapy Designation meeting, planned for 2Q2023

This indication will effectively converge the initiated (not enrolling) Phase 3 Acute trial into the ongoing P2b/3 trial in Suicidal Treatment-Resistant Bipolar Depression

The company is evaluating changes to its registrational program for NRX-101 and will seek to consolidate patients originally expected to enroll in the in the ASIB study into the currently enrolling Phase 2b/3 trial.

Agreed upon path  
to submit  
rolling review  
**NDA in 2023**

**FDA Approval Roadmap – Integrated Phase 2b/3 for Suicidal Treatment-Resistant Bipolar Depression (2)**

This pathway would potentially allow registration of NRX-101 for Suicidal Treatment-Resistant Bipolar Depression, regardless of the mechanism of stabilization.

This broader indication may also offer significant advantages in commercialization of the product

Pathway would negate the need for a separate NDA for ketamine in Suicidal stabilization.

Data from the integrated trial are expected by 4Q 2023.

Agreed upon path  
to submit  
rolling review  
**NDA in 2023**

Source: Company reports.

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Exhibit 16: Q4 2023 and Recent Business Highlights (as of April 1, 2024)

## **NRx Pharmaceuticals (Nasdaq:NRXP) Reports Fourth Quarter and Full Year 2023 Financial Results and Provides Business Update**

Four potential near-term milestones, including data from two clinical trials, an NDA filing and an upcoming share dividend

-- 50% reduction in corporate overhead and 25% reduction in overall net loss in 2023, compared to 2024 with \$0.20 per share improvement in negative earnings. Additions to working capital of \$8 million in Q1 2024.

-- Company forecasts first commercial revenue in 2024 from sales of ketamine and related technologies. Company received advance of first milestone payments in 2024 for ongoing development of NRX-101 from Alvogen and Lotus Pharmaceuticals, Inc. (1975.TW)

-- Company announces new partnership around the first drug to potentially modify the underlying cause of schizophrenia

-- Data lock this week and top-line data expected this month, after completed enrollment of the Phase 2b/3 trial of NRX-101 in Treatment Resistant Bipolar Depression (TRBD); trial demonstrated 94% rater concordance, far in excess of industry norms and exceeded industry norms in medication compliance

-- Two new Investigational New Drug applications (INDs) accepted by the US Food and Drug Administration (FDA) for NRX-101 in Chronic Pain and Complicated UTI.

-- Data lock expected this week in 200-person DOD-funded trial of D-cycloserine (DCS), the key component of NRX-101, to treat chronic pain, conducted by Northwestern University

-- Grant of Qualified Infectious Disease Product (QIDP), Fast Track and Priority Review designations for NRX-101 in the treatment of Complicated Urinary Tract Infection (cUTI); Publication last week of QIDP-qualifying data in a peer-reviewed journal. NRx is reviewing partnership options

-- Established HOPE Therapeutics to develop and launch IV Ketamine together with related technologies with FDA New Drug Application to be submitted this year. In advance of FDA approval, HOPE is partnered with national 503b and 503a pharmacies to address the ketamine shortage declared by FDA. HOPE is planned to be spun out as a separate company to be owned by NRx, current NRx shareholders via a tax-free dividend, and new investors; Term Sheets received from prospective anchor investors for \$60 million of new investment, once publicly listed

-- HOPE is presenting data from four randomized, prospective trials demonstrating safety and efficacy in 800 patients of IV Ketamine in treating severe and suicidal depression as the clinical basis for New Drug Application (NDA) for HTX-100 (IV Ketamine); expecting stability and CMC data sufficient for NDA filing by June 2024.

-- Added over \$8 million in working capital, including an advance of a \$5.1 million milestone payment from partners Alvogen, Inc. and Lotus Pharmaceuticals

-- Elected nationally recognized attorney in highly regulated industries, and healthcare specialist, Janet Rehnquist, Esq., to the Company's Board of Directors

-- Management has taken actions to address NASDAQ listing compliance and naked shorting of NRx securities

Source: Company reports.

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Exhibit 17: Promising Findings in Phase 2b/3 Clinical Trial (April 30, 2024)

## NRx Pharmaceuticals (Nasdaq:NRXP) Announces Promising Findings in Phase 2b/3 Clinical Trial of NRX-101 vs. Lurasidone for Treatment of Suicidal Bipolar Depression



- NRX-101 is first oral antidepressant to show 33% advantage in sustained remission in suicidality (not statistically significant at this sample size) and 75% advantage in relief from Akathisia relative to lurasidone – *never previously shown with an oral antidepressant*. Suicidality signal met the study's promising zone criteria and the akathisia signal approached statistical significance (P=0.076)
- *Both NRX-101 and lurasidone, an accepted standard of care in Bipolar Depression, demonstrated approximately 50% reduction in symptoms of depression*
- These data are comparable to previous statistically-significant finding of reduced suicidality and in the published STABIL-B trial and support an approval pathway via a 300-person registrational trial with sustained remission in suicidality as the primary endpoint
- Company believes that an oral antidepressant that demonstrates reduction in suicidality has potential to become standard of care for treatment of bipolar depression.
- Data from this study expand the potential utility of NRx-101 to treat both patients with suicidal bipolar depression (who will require prior use of ketamine) and those without subacute suicidality (nearly 7 million patients in the US).

RADNOR, Pa., April 30, 2024 /PRNewswire/ -- NRx Pharmaceuticals, Inc. (Nasdaq: NRXP) ("NRx Pharmaceuticals", the "Company"), a clinical stage pharmaceutical company today that its Breakthrough Therapy designated investigational drug NRX-101 vs lurasidone demonstrated a promising, though not yet statistically significant 33% reduction in suicidality together with a 70% reduction (P=.076) reduction in symptoms of akathisia – a side effect of antidepressants that is closely linked to suicide and considered a medical emergency. Because of the high-risk nature of these patients, a placebo group could not be employed, and NRX-101, a fixed dose combination of D-cycloserine (DCS) and lurasidone, was compared to lurasidone alone (the standard of care). In the Company's previously published STABIL-B trial (**STABIL-B**), NRX-101 was demonstrated to be superior to lurasidone in reducing both depression and suicidality after ketamine while showing a trend towards reducing akathisia (a side effect involving restlessness and agitation that is considered a warning sign of impending suicide). In this trial, without prior use of ketamine, NRX-101 and lurasidone were comparable in their effect on depression. The trial was a randomized, prospective, double-blind study conducted at multiple sites in the United States whose protocol and statistical analysis plan may be viewed on [www.clinicaltrials.gov](http://www.clinicaltrials.gov) (NCT03395392).

Source: Company reports.

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Exhibit 18: Near Term Catalysts and Outlook

## Looking Forward

**Data readouts in Bipolar and Pain expected in coming months**



**Revenue potential in 2024**



**Demonstrated ability to execute in CNS space**



### Confirmatory 200 Person Trial Awaits Readout

- Five year \$4.9 million trial funded by US Department of Defense
- DCS vs. placebo at 400mg/day
- Data completed
- Awaiting study results
- NRx research demonstrates a 25µg/ml dose at which DCS becomes an NMDA antagonist.
- The 400mg dose in this trial is at the lower end of that threshold
- There may be therapeutic space to increase the DCS dose beyond 400mg. However, the lurasidone component of NRX-101 will likely be needed to prevent CNS side effects

**D-cycloserine for the Treatment of Chronic, Refractory Low Back Pain**

ClinicalTrials.gov ID [NCT03535688](#)

Sponsor [Northwestern University](#)

Information provided by [Thomas J. Schnitzer, Northwestern University \(Responsible Party\)](#)

Last Update Posted [2023-06-15](#)

**Study Overview**

**Brief Summary:**  
The purpose of this study is to evaluate the efficacy and safety of D-cycloserine versus placebo in relieving the signs and symptoms of patients with chronic lower back pain.

**Detailed Description:**  
This is a 26-week, double-blind, randomized, placebo-controlled two-arm parallel-group trial of d-cycloserine, a pharmacological treatment selected based on positive results from previous preclinical and clinical studies, for the treatment of chronic, refractory low back pain (CRBP). After a 2-week screening period, individuals will be randomized to receive either 12 weeks of d-cycloserine or placebo and then followed for an additional 12 weeks to evaluate persistence of benefit at study endpoint, 24 weeks after randomization. During the 12-week treatment period, participants will undergo evaluation at baseline and at clinic visits on weeks 2, 6 and 12 after randomization to assess pain, proper treatment...

[+ Show more](#)

**OFFICIAL TITLE**  
D-cycloserine for the Treatment of Chronic, Refractory Low Back Pain

**CONDITIONS**  
[Low Back Pain](#) [Pain](#)

**INTERVENTION / TREATMENT**  
Drug: D-cycloserine  
Drug: Placebo

**STUDY START (ACTUAL)**  
2018-03-30

**PRIMARY COMPLETION (ESTIMATED)**  
2023-08

**STUDY COMPLETION (ESTIMATED)**  
2023-12

**ENROLLMENT (ESTIMATED)**  
244

**STUDY TYPE**  
Interventional

**PHASE**  
Phase 2

**OTHER STUDY ID NUMBERS**  
STU00205398  
A-20364 (Other Grant/Funding Number) (OTHER\_GRANT, Department of Defense)

Source: Company reports.

### Exhibit 19: NRx Pharmaceuticals, Inc. Stock Price (5-Years)

SPAC (Big Rock Partners Acquisition Corp.) IPO - 11/20/17

SPAC Merger Announcement (with NeuroRx, Inc.) - 12/14/20

SPAC Merger Completion (to form NRx Pharmaceuticals, Inc.) - 5/25/21



\*Reflects a 1:10 reverse stock split in April 2024

Source: <https://bigcharts.marketwatch.com/>

### Exhibit 20: Consensus Expectations (as of April 1, 2024)

	Revenue (mils)			EPS	
	2023E	2024E		2023E	2024E
Q1 Mar	\$0A	\$0E	Q1 Mar	\$(1.64)A	\$(0.80)E
Q2 Jun	\$0A		Q2 Jun	\$(1.19)A	
Q3 Sep	\$0A		Q3 Sep	\$(0.74)A	
Q4 Dec	\$0E		Q4 Dec	\$(0.80)E	
Total	\$0E	\$2.2E	Total	\$(4.40)E	\$(2.40)E

\*Quarterly estimates may not add to annual estimates due to variations in contributing estimates and rounding

\*Reflects a 1:10 reverse stock split in April 2024

Source: Company report, LSEG, and Ascendant Capital Markets estimates

## FINANCIAL MODEL

### NRx Pharmaceuticals, Inc.

Income Statement (\$ mils)	Mar-22	Jun-22	Sep-22	Dec-22	2022	Mar-23	Jun-23	Sep-23	Dec-23	2023	Mar-24	Jun-24	Sep-24	Dec-24	2024	Mar-25	Jun-25	Sep-25	Dec-25	2025
Fiscal Year End: December 31	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1E	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E
<b>Total Revenue</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
Cost of Revenues	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gross Profit	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Research & development	5.5	3.0	4.1	4.5	17.0	3.7	3.9	3.3	2.5	13.4	3.0	3.0	3.0	3.0	12.0	3.0	3.0	3.0	3.0	12.0
General and administrative	10.2	6.6	5.0	5.5	27.4	5.8	4.1	2.5	1.9	14.2	2.0	2.0	2.0	2.0	8.0	2.0	2.0	2.0	2.0	8.0
Restructuring and other					0.0		0.3			0.3					0.0					0.0
Total operating expenses	15.7	9.6	9.1	10.0	44.4	9.4	8.2	5.8	4.4	27.8	5.0	5.0	5.0	5.0	20.0	5.0	5.0	5.0	5.0	20.0
<b>Operating income (loss)</b>	<b>(15.7)</b>	<b>(9.6)</b>	<b>(9.1)</b>	<b>(10.0)</b>	<b>(44.4)</b>	<b>(9.4)</b>	<b>(8.2)</b>	<b>(5.8)</b>	<b>(4.4)</b>	<b>(27.8)</b>	<b>(5.0)</b>	<b>(5.0)</b>	<b>(5.0)</b>	<b>(5.0)</b>	<b>(20.0)</b>	<b>(5.0)</b>	<b>(5.0)</b>	<b>(5.0)</b>	<b>(5.0)</b>	<b>(20.0)</b>
Interest income (expense)	(0.0)	0.0	0.1	0.1	0.2	0.2	0.1	0.1	(0.0)	0.4	(0.3)	(0.3)	(0.3)	(0.3)	(1.3)	(0.3)	(0.3)	(0.3)	(0.3)	(1.3)
Other income (expense)	2.3	2.6	(0.0)	(0.5)	4.3	(1.8)	(0.7)	(0.3)	0.1	(2.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Income before income taxes	(13.4)	(7.0)	(9.1)	(10.3)	(39.8)	(11.0)	(8.7)	(6.1)	(4.3)	(30.2)	(5.3)	(5.3)	(5.3)	(5.3)	(21.3)	(5.3)	(5.3)	(5.3)	(5.3)	(21.3)
Income taxes					0.0					0.0					0.0					0.0
Net income (loss)	(13.4)	(7.0)	(9.1)	(10.3)	(39.8)	(11.0)	(8.7)	(6.1)	(4.3)	(30.2)	(5.3)	(5.3)	(5.3)	(5.3)	(21.3)	(5.3)	(5.3)	(5.3)	(5.3)	(21.3)
Nonrecurring/noncash adjustments					0.0					0.0					0.0					0.0
<b>Net income (pro forma)</b>	<b>(13.4)</b>	<b>(7.0)</b>	<b>(9.1)</b>	<b>(10.3)</b>	<b>(39.8)</b>	<b>(11.0)</b>	<b>(8.7)</b>	<b>(6.1)</b>	<b>(4.3)</b>	<b>(30.2)</b>	<b>(5.3)</b>	<b>(5.3)</b>	<b>(5.3)</b>	<b>(5.3)</b>	<b>(21.3)</b>	<b>(5.3)</b>	<b>(5.3)</b>	<b>(5.3)</b>	<b>(5.3)</b>	<b>(21.3)</b>
EBITDA																				
Shares, Basic	6.4	6.6	6.6	6.8	6.6	6.7	7.3	8.2	8.2	7.6	9.6	9.7	9.8	9.9	9.8	10.0	10.1	10.2	10.3	10.2
Shares, Diluted	6.4	6.6	6.6	6.8	6.6	6.7	7.3	8.2	8.2	7.6	9.6	9.7	9.8	9.9	9.8	10.0	10.1	10.2	10.3	10.2
EPS Basic (pro forma)	(\$2.11)	(\$1.06)	(\$1.37)	(\$1.53)	(\$6.05)	(\$1.64)	(\$1.19)	(\$0.74)	(\$0.53)	(\$3.98)	(\$0.55)	(\$0.55)	(\$0.54)	(\$0.54)	(\$2.18)	(\$0.53)	(\$0.53)	(\$0.52)	(\$0.52)	(\$2.10)
EPS Diluted (pro forma)	(\$2.11)	(\$1.06)	(\$1.37)	(\$1.53)	(\$6.05)	(\$1.64)	(\$1.19)	(\$0.74)	(\$0.53)	(\$3.98)	(\$0.55)	(\$0.55)	(\$0.54)	(\$0.54)	(\$2.18)	(\$0.53)	(\$0.53)	(\$0.52)	(\$0.52)	(\$2.10)
<b>Margins</b>																				
Gross margin																				
Research & development																				
General and administrative																				
Operating margin																				
Tax rate, GAAP																				
Net margin																				
<b>Y/Y % change</b>																				
Total Revenue																				
Gross margin																				
Research & development	88%	-37%	-34%	-31%	-16%	-33%	31%	-20%	-43%	-21%	-18%	-23%	-9%	18%	-10%	0%	0%	0%	0%	0%
General and administrative	387%	-47%	-64%	-88%	-63%	-43%	-39%	-50%	-66%	-48%	-65%	-51%	-20%	7%	-44%	0%	0%	0%	0%	0%
Operating income (loss)	-39%	-44%	-55%	-81%	-62%	-40%	-15%	-36%	-56%	-37%	-47%	-39%	-14%	13%	-28%	0%	0%	0%	0%	0%
Net income (loss)	-47%	-97%	-56%	-78%	-89%	-18%	25%	-33%	-58%	-24%	-52%	-39%	-12%	23%	-29%	0%	0%	0%	0%	0%
EPS Diluted (pro forma)	-70%	-98%	-66%	-81%	-92%	-23%	12%	-46%	-65%	-34%	-66%	-54%	-27%	1%	-45%	-4%	-4%	-4%	-4%	-4%

Source: Company reports and Ascendant Capital Markets estimates.

\*Reflects a 1-for-10 Reverse Stock Split in April 2024



**NRx Pharmaceuticals, Inc.**

Balance Sheet (\$ mils)	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Fiscal Year End: December 31	Q1A	Q2A	Q3A	Q4A	Q1A	Q2A	Q3A	Q4A	Q1E	Q2E	Q3E	Q4E	Q1E	Q2E	Q3E	Q4E
<b>Assets</b>																
Cash and cash equivalents	40.2	24.5	18.2	20.1	16.5	15.0	8.9	4.6	12.0	5.5	(1.0)	(7.6)	(14.1)	(20.6)	(27.1)	(33.7)
Short term investments									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Account receivable																
Deferred income taxes									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prepaid expenses and other	3.4	7.9	6.6	5.7	5.3	4.8	4.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Total current assets	43.6	32.4	24.8	25.8	21.8	19.8	13.1	6.9	14.3	7.8	1.2	(5.3)	(11.8)	(18.3)	(24.9)	(31.4)
Property and equipment, net									(0.0)	0.0	(0.0)	0.0	0.0	0.0	0.0	0.0
Intangibles, net									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Deferred income tax									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total assets</b>	<b>43.6</b>	<b>32.4</b>	<b>24.8</b>	<b>25.8</b>	<b>21.8</b>	<b>19.8</b>	<b>13.1</b>	<b>7.3</b>	<b>14.3</b>	<b>7.8</b>	<b>1.2</b>	<b>(5.3)</b>	<b>(11.8)</b>	<b>(18.3)</b>	<b>(24.9)</b>	<b>(31.4)</b>
<b>Liabilities and stockholders' equity</b>																
Accounts payable	4.3	3.1	2.2	2.1	3.8	2.2	3.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Accrued expenses	4.5	4.0	5.8	5.8	6.1	6.9	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
Deferred income tax									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Warrant liabilities	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other	2.5					0.8	0.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Short term debt	0.5			8.7	12.2	12.7	10.1	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
<b>Total current liabilities</b>	<b>11.9</b>	<b>7.1</b>	<b>8.0</b>	<b>16.6</b>	<b>22.1</b>	<b>22.6</b>	<b>19.3</b>	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>	<b>19.0</b>
Deferred income taxes									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Warrant liabilities									0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other long term liabilities									7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Long term debt				1.8					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total other liabilities</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>1.8</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>7.0</b>	<b>7.0</b>	<b>7.0</b>	<b>7.0</b>	<b>7.0</b>	<b>7.0</b>	<b>7.0</b>	<b>7.0</b>
Preferred stock							0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Common stock	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	(1.1)	(2.3)	(3.5)	(4.7)	(5.9)	(7.1)	(8.3)	(9.5)
Additional paid-in capital	228.3	229.0	229.5	230.4	233.6	239.9	242.5	241.3	241.3	241.3	241.3	241.3	241.3	241.3	241.3	241.3
Retained earnings	(196.7)	(203.7)	(212.8)	(223.1)	(234.0)	(242.8)	(248.8)	(253.1)	(258.5)	(263.8)	(269.1)	(274.4)	(279.8)	(285.1)	(290.4)	(295.7)
Other									6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Accumulated other comprehensive income					0.1	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
<b>Total stockholders' equity</b>	<b>31.7</b>	<b>25.4</b>	<b>16.8</b>	<b>7.4</b>	<b>(0.3)</b>	<b>(2.8)</b>	<b>(6.2)</b>	<b>(11.7)</b>	<b>(11.8)</b>	<b>(18.3)</b>	<b>(24.8)</b>	<b>(31.3)</b>	<b>(37.9)</b>	<b>(44.4)</b>	<b>(50.9)</b>	<b>(57.4)</b>
<b>Total stockholders' equity and liabil</b>	<b>43.6</b>	<b>32.4</b>	<b>24.8</b>	<b>25.8</b>	<b>21.8</b>	<b>19.8</b>	<b>13.1</b>	<b>7.3</b>	<b>14.3</b>	<b>7.8</b>	<b>1.2</b>	<b>(5.3)</b>	<b>(11.8)</b>	<b>(18.3)</b>	<b>(24.9)</b>	<b>(31.4)</b>

**Balance Sheet Drivers**

	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24	Sep-24	Dec-24	Mar-25	Jun-25	Sep-25	Dec-25
Book & Cash Value (per share)	Q1A	Q2A	Q3A	Q4A	Q1A	Q2A	Q3A	Q4A	Q1E	Q2E	Q3E	Q4E	Q1E	Q2E	Q3E	Q4E
Book Value per Share (diluted)	\$4.98	\$3.86	\$2.53	\$1.10	(\$0.04)	(\$0.38)	(\$0.76)	(\$1.43)	(\$1.22)	(\$1.88)	(\$2.53)	(\$3.16)	(\$3.79)	(\$4.39)	(\$4.99)	(\$5.57)
Cash per Share (diluted)	\$6.31	\$3.73	\$2.75	\$2.97	\$2.45	\$2.04	\$1.09	\$0.56	\$1.25	\$0.56	(\$0.11)	(\$0.76)	(\$1.41)	(\$2.04)	(\$2.66)	(\$3.27)
Net cash per Share (diluted)	\$6.23	\$3.73	\$2.75	\$1.41	\$0.64	\$0.31	(\$0.14)	(\$0.56)	\$0.30	(\$0.38)	(\$1.04)	(\$1.69)	(\$2.33)	(\$2.95)	(\$3.56)	(\$4.16)

Source: Company reports and Ascendant Capital Markets estimates

**NRx Pharmaceuticals, Inc.**

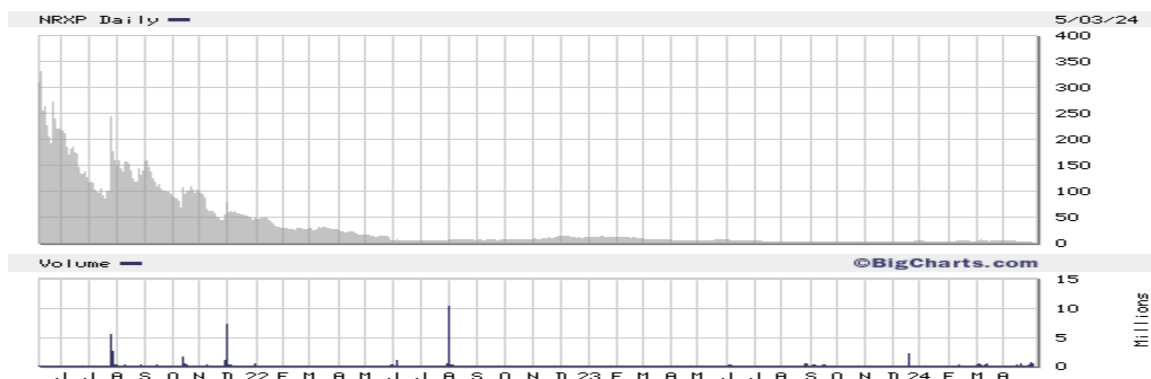
Cash Flow Statement (\$ mils)	Mar-22	Jun-22	Sep-22	Dec-22	2022	Mar-23	Jun-23	Sep-23	Dec-23	2023	Mar-24	Jun-24	Sep-24	Dec-24	2024	Mar-25	Jun-25	Sep-25	Dec-25	2025	
Fiscal Year End: December 31	Q1A	Q2A	Q3A	Q4A	FY-A	Q1A	Q2A	Q3A	Q4A	FY-A	Q1E	Q2E	Q3E	Q4E	FY-E	Q1E	Q2E	Q3E	Q4E	FY-E	
<b>Cash flow from operating activities</b>																					
Net income	(13.4)	(7.0)	(9.1)	(10.2)	(39.8)	(11.0)	(8.7)	(6.1)	(4.3)	(30.2)	(5.3)	(5.3)	(5.3)	(5.3)	(21.3)	(5.3)	(5.3)	(5.3)	(5.3)	(21.3)	
Depreciation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Amortization					0.0					0.0					0.0					0.0	
Debt related amortization expen	0.0	(0.0)	0.0	0.0	0.0					0.0					0.0					0.0	
Stock comp	1.3	1.0	0.5	0.8	3.6	0.7	0.5	0.4	(1.2)	0.4	(1.2)	(1.2)	(1.2)	(4.8)	(1.2)	(1.2)	(1.2)	(1.2)	(1.2)	(4.8)	
Deferred income taxes					0.0					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Change in fair value of warrant l	(0.2)	(0.1)	0.0	0.5	0.3	1.8	0.7	0.3	(0.1)	2.7					0.0					0.0	
Change in fair value of earnout c	(2.1)	(2.5)			(4.6)																
Writedowns and impairments					0.0					0.0					0.0					0.0	
Other gains/losses					0.0		0.3			0.3					0.0					0.0	
Other					0.0					0.0					0.0					0.0	
Changes in operating assets and liabilities:																					
Accounts receivable					0.0					0.0					0.0					0.0	
Prepaid expenses & other curre	1.7	(4.5)	1.3	0.8	(0.6)	0.5	0.4	0.6	1.5	3.0					0.0					0.0	
Income tax					0.0					0.0					0.0					0.0	
Other assets					0.0					0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	
Accounts payable	0.6	(1.2)	(0.9)	(0.1)	(1.6)	1.7	(1.6)	1.5	1.0	2.7					0.0					0.0	
Accrued expenses	1.6	(0.5)	1.8	(0.0)	2.9	0.3	0.6	(1.3)	(0.1)	(0.5)					0.0					0.0	
Other liabilities					0.0					0.0	7.0	0.0	0.0	0.0	7.0	0.0	0.0	0.0	0.0	0.0	
<b>Net cash (used in) provided by</b>	<b>(10.4)</b>	<b>(14.8)</b>	<b>(6.3)</b>	<b>(8.3)</b>	<b>(39.8)</b>	<b>(6.1)</b>	<b>(7.8)</b>	<b>(4.6)</b>	<b>(3.2)</b>	<b>(21.7)</b>	<b>0.9</b>	<b>(6.5)</b>	<b>(6.5)</b>	<b>(6.5)</b>	<b>(18.7)</b>	<b>(6.5)</b>	<b>(6.5)</b>	<b>(6.5)</b>	<b>(6.5)</b>	<b>(26.1)</b>	
<b>Cash flow from investing activities</b>																					
Purchases of property and equip	(0.0)	(0.0)	(0.0)	0.0	(0.0)	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)	(0.0)	(0.0)	0.0	(0.0)	(0.0)	(0.0)	
Purchases of short-term investments					0.0					0.0					0.0					0.0	
Acquisitions					0.0					0.0					0.0					0.0	
Other					0.0					0.0					0.0					0.0	
<b>Net cash used in investing activ</b>	<b>(0.0)</b>	<b>(0.0)</b>	<b>(0.0)</b>	<b>0.0</b>	<b>(0.0)</b>	<b>(0.0)</b>	<b>0.0</b>	<b>(0.0)</b>	<b>0.0</b>	<b>(0.0)</b>	<b>0.0</b>	<b>(0.0)</b>	<b>0.0</b>	<b>(0.0)</b>	<b>(0.0)</b>	<b>(0.0)</b>	<b>0.0</b>	<b>(0.0)</b>	<b>(0.0)</b>	<b>(0.0)</b>	
<b>Cash flow from financing activities</b>																					
Issuance of debt				10.0	10.0		0.8		0.4	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Repayment of debt		(0.5)			(0.5)		(0.1)	(2.7)	(0.3)	(3.1)					0.0					0.0	
Issuance of stock	23.0	(0.3)	(0.0)	0.1	22.7	2.5	5.6	1.2	(1.2)	8.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Proceeds from stock option exercises				0.0	0.0					0.0					0.0					0.0	
Other					0.0					0.0	6.5				6.5					0.0	
Dividends and distributions					0.0					0.0					0.0					0.0	
<b>Cash provided by (used in) fina</b>	<b>23.0</b>	<b>(0.9)</b>	<b>(0.0)</b>	<b>10.1</b>	<b>32.2</b>	<b>2.5</b>	<b>6.3</b>	<b>(1.5)</b>	<b>(1.1)</b>	<b>6.2</b>	<b>6.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>6.5</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	
Effect of exchange rate on cash					0.0					0.0					0.0					0.0	
<b>Net increase (decrease) in cash</b>	<b>12.6</b>	<b>(15.7)</b>	<b>(6.3)</b>	<b>1.8</b>	<b>(7.6)</b>	<b>(3.5)</b>	<b>(1.5)</b>	<b>(6.1)</b>	<b>(4.3)</b>	<b>(15.5)</b>	<b>7.4</b>	<b>(6.5)</b>	<b>(6.5)</b>	<b>(6.5)</b>	<b>(12.2)</b>	<b>(6.5)</b>	<b>(6.5)</b>	<b>(6.5)</b>	<b>(6.5)</b>	<b>(26.1)</b>	
<b>Beginning cash and equivalents</b>	<b>27.6</b>	<b>40.2</b>	<b>24.5</b>	<b>18.2</b>	<b>27.6</b>	<b>20.1</b>	<b>16.5</b>	<b>15.0</b>	<b>8.9</b>	<b>20.1</b>	<b>4.6</b>	<b>12.0</b>	<b>5.5</b>	<b>(1.0)</b>	<b>4.6</b>	<b>(7.6)</b>	<b>(14.1)</b>	<b>(20.6)</b>	<b>(27.1)</b>	<b>(7.6)</b>	
<b>Ending cash and equivalents</b>	<b>40.2</b>	<b>24.5</b>	<b>18.2</b>	<b>20.1</b>	<b>20.1</b>	<b>16.5</b>	<b>15.0</b>	<b>8.9</b>	<b>4.6</b>	<b>4.6</b>	<b>12.0</b>	<b>5.5</b>	<b>(1.0)</b>	<b>(7.6)</b>	<b>(7.6)</b>	<b>(14.1)</b>	<b>(20.6)</b>	<b>(27.1)</b>	<b>(33.7)</b>	<b>(33.7)</b>	

Source: Company reports and Ascendant Capital Markets estimates

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## NRx Pharmaceuticals, Inc.



*\*Reflects a 1:10 reverse stock split in April 2024*

Source: <https://bigcharts.marketwatch.com/>

	Report Date		Price
Report	Date	Rating	Target
1	11/9/2022	B	40.00
2	11/18/2022	B	45.00
3	4/5/2023	B	47.50
4	5/23/2023	B	50.00
5	9/6/2023	B	52.50
6	12/22/2023	B	55.00

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**BUY:** We expect the stock to provide a total return of 15% or more within a 12-month period.

**HOLD:** We expect the stock to provide a total return of negative 15% to positive 15% within a 12-month period.

**SELL:** We expect the stock to have a negative total return of more than 15% within a 12-month period.

Total return is defined as price appreciation plus dividend yield.

### Ascendant Capital Markets, LLC Distribution of Investment Ratings (as of April 15, 2024)

Rating	Count	Percent	Investment Banking Services Past 12 months	
			Count	Percent
Buy	55	98%	18	33%
Hold	0	0%	0	0%
Sell	1	2%	0	0%
Total	56	100%	18	32%

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