

# NRx Pharmaceuticals, Inc.

*Q3 EPS upside. Major opportunities in NRX-100 (IV ketamine) and NRX-101, with both NDAs expected soon. Raising P/T to \$45.*

**Q3 EPS upside:** NRx recently (on November 14) reported its Q3 2024 (ending September) results. Net loss was \$1.6 million or EPS of \$(0.15) compared with our and consensus estimates of \$(0.66) – (0.73). There was no company guidance. NRx is a clinical stage drug development company so it generates no revenue.

**Operating expenses:** Operating expenses were \$3.0 million, down from Q2's \$7.1 million on much lower R&D and G&A costs.

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

**Raising 2025 estimates:** We are adjusting our 2024 EPS estimate to \$(1.96) from \$(2.84). We have raised our 2025 estimates for strong revenues and slight profitability.

**Focused on NRX-100 and NRX-101:** Its main drugs are NRX-100 (IV Ketamine) and NRX-101 (D-cylcoserine/Lurasidone) for the treatment of bipolar depression in patients with suicidality (the risk of suicide). The company plans to file NDA (New Drug Application) with the FDA for NRX-100 and NRX-101 by year end 2024.

**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 May, the company announced final positive clinical trials data in its Phase 2b/3 Clinical Trial of NRX-101 vs. Lurasidone for Treatment of Suicidal Bipolar Depression. The company believes that the findings when combined with the prior STABIL-B trial, demonstrate a basis for seeking accelerated drug approval of NRX-101 based on improved safety related to akathisia and suicidality in the setting of comparable antidepressant efficacy.

**NRX-100:** NRX-100 is Intravenous (IV) ketamine which has now become a standard of care for acute treatment of suicidal depression, in the absence of an FDA-labeled product. The company is developing NRX-100 (intravenous ketamine) as a labeled drug to treat acute depression and suicidality.

**HOPE Therapeutics spinoff:** The company plans to file a NDA for NRX-100 in 2024, with potential for revenue in 2025. The company plans to partially spin off HOPE Therapeutics (the first nationwide network of Interventional Psychiatry Clinics focused on suicidal depression and PTSD) to shareholders. HOPE Therapeutics is expected to be self-funded and profitable in its first year.

**Signed LOI to acquire two precision psychiatry centers for HOPE Therapeutics:** The company is in process to finalize the acquisitions for 2 psychiatry centers. It is also in negotiation with four additional psychiatry centers with the goal of assembling a network delivering \$25 million in ketamine-based precision psychiatric treatment for suicidal depression by year-end 2024.

**Balance sheet:** As of Q3, the company has \$2 million in cash and \$6 million in debt. In October (current Q4), NRx received \$5 million from its 2<sup>nd</sup> tranche financing.

**New CEO and CFO:** In October, Stephen Willard resigned as CEO and Jonathan Javitt, Chairman and co-founder and was previously CEO, was appointed Interim CEO while a search is on for a permanent CEO. In November, Michael Abrams was appointed as its permanent Chief Financial Officer succeeding Interim-CFO Richard Narido.

**Current valuation attractive:** We are maintaining our BUY rating, but raising our 12-month price target to \$45 from \$44 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: \$1.31

Target: \$45  
(from \$44)

## Stock Data

|                                      |             |
|--------------------------------------|-------------|
| Exchange:                            | NasdaqCM    |
| 52-week Range:                       | 1.10 – 7.33 |
| Shares Outstanding (million):        | 12          |
| Market cap (\$million):              | \$16        |
| EV (\$million):                      | \$20        |
| Debt (\$million):                    | \$6         |
| Cash (\$million):                    | \$2         |
| Avg. Daily Trading Vol. (\$million): | \$0.2       |
| Float (million shares):              | 8           |
| Short Interest (million shares):     | 0.7         |
| Dividend, annual (yield):            | \$0 (NA%)   |

## Revenues (US\$ million)

|         | <u>2024E</u><br><u>(Cur.)</u> | <u>2024E</u><br><u>(Old)</u> | <u>2025E</u><br><u>(Cur.)</u> | <u>2025E</u><br><u>(Old)</u> |
|---------|-------------------------------|------------------------------|-------------------------------|------------------------------|
| Q1 Mar  | 0A                            |                              | 5E                            | 0E                           |
| Q2 Jun  | 0A                            |                              | 10E                           | 0E                           |
| Q3 Sep  | 0A                            | 0E                           | 20E                           | 0E                           |
| Q4 Dec  | <u>0E</u>                     |                              | <u>25E</u>                    | <u>0E</u>                    |
| Total   | <u>0E</u>                     |                              | <u>60E</u>                    | <u>0E</u>                    |
| EV/Revs | N/A                           |                              | 0.3x                          |                              |

## Earnings per Share (pro forma)

|        | <u>2024E</u><br><u>(Cur.)</u> | <u>2024E</u><br><u>(Old)</u> | <u>2025E</u><br><u>(Cur.)</u> | <u>2025E</u><br><u>(Old)</u> |
|--------|-------------------------------|------------------------------|-------------------------------|------------------------------|
| Q1 Mar | (0.74)A                       |                              | (0.40)E                       | (0.60)E                      |
| Q2 Jun | (0.75)A                       |                              | (0.22)E                       | (0.60)E                      |
| Q3 Sep | (0.15)A                       | (0.66)E                      | 0.25E                         | (0.59)E                      |
| Q4 Dec | <u>(0.39)E</u>                | <u>(0.69)E</u>               | <u>0.37E</u>                  | <u>(0.59)E</u>               |
| Total  | <u>(1.96)E</u>                | <u>(2.84)E</u>               | <u>0.02E</u>                  | <u>(2.39)E</u>               |
| P/E    | N/A                           |                              | 66x                           |                              |

\*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 20.**

Exhibit 1: NRx Pharmaceuticals, Inc. Corporate Overview



## Recent clinical developments enable FDA filing in 2024 with Potential for 2025 Commercial Revenue



NASDAQ: NRXP

THIS YEAR

- **New Drug Application planned for NRX-100 (IV Ketamine) in Suicidal Depression**

Potential for \$100 million+ revenue in 2025 with peak in excess of \$1 billion

- **Accelerated Approval application planned for NRX-101 in Bipolar Depression with Suicidality or Akathisia**

*Enabled by Prior Breakthrough Therapy designation for NRX-101*

- **Launch of HOPE Therapeutics with Expected 2024 Revenue; NRXP majority owner**

Initial \$100 million mental health clinic rollup; independent funding via bond issuance; NRXP shareholders to receive share distribution

FUTURE YEARS

- **Path to 2026 approval as first antibiotic to treat cUTI without risk of *C. Difficile* infection based on QIDP and Fast Track awards**

Requires Phase 2/3 Trial

Source: Company reports.

Exhibit 2: NRx's Investment Summary

## NRx Clinical Programs – 2025 Path to Profitability



Suicidal Depression

### NRX-100 (IV Ketamine)

- Fast Track NDA in **2024**
- **Expected PDUFA 2025**
- Approvable efficacy data from four studies in hand
- Manufacturing data has reached 12 month stability
- Six-month Ketamine tox data
- Alignment on pediatric plan with FDA
- \$2+ billion addressable market



Bipolar Depression

### NRX-101 (Oral DCS/Lurasidone)

- Statistically-significant Phase 2 data: first antidepressant to decrease suicidality and/or akathisia
- NDA/Accelerated Approval for bipolar patients with akathisia in **2H24**
- Focused initial launch
- 7 million patient broad bipolar addressable market
- > \$2 billion market potential



Interventional Psychiatry

### HOPE Therapeutics

- A network of Interventional Psychiatry Clinics focused on ketamine and other lifesaving interventions for Suicidal Depression and PTSD
- Targeting \$100 million revenue by year-end 2025
- Acquisition Financing in on is committed
- First acquisitions in **2024**
- Expected in profit in **2025**

Source: Company reports.

Exhibit 3: NRX-101

## NRX-101: Oral medication with potential for 2025 NDA filing

### First oral antidepressant shown to reduce Suicidality & Akathisia

- 1 Current efficacy and safety data support filing an NDA for Accelerated Approval in the narrow indication of patients with suicidal bipolar depression and akathisia
- 2 Market potential for NRX-101 for suicidal bipolar depression and akathisia is well in excess of \$2 Billion
- 3 Narrow initial indication allows focused launch by NRx alone
- 4 Additional phase 3 trial vs. placebo needed for the broad 7 million person bipolar market; planned to be financed by a partner or new investors
- 5 NRX-101 Phase 3 investment is not part of use of current capital

## 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 (as of July 2024)

# Our Pipeline

## Leveraging our Multi-Billion Dollar NMDA Platform

| Product                    | Phase 1  | Phase 2 | Phase 3 | NDA | Status   |
|----------------------------|--|---------|---------|-----|--|
| <u>Suicidal Depression</u> |  |         |         |     |  |
| HTX-100 (IV Ketamine)      | Suicidal Depression<br><i>*Collaboration Agreement with Study Leadership of two well-powered, academic clinical trials</i> |         |         |     | NDA Filing 2H24   PDUFA est. 2025                                |
| NRX-101™                   | Suicidal, Treatment-Resistant Bipolar Depression with Akathisia or Suicidality   |         |         |     | Filing NDA for Accelerated Approval 2H24; est PDUFA 2025         |
|                            | Bipolar Depression   |         |         |     | Phase 3 confirmatory trial, post approval                        |
| <u>Chronic Pain</u>        |  |         |         |     |  |
| D-Cycloserine (DCS)        | Chronic Back Pain  |         |         |     | 200 person, independent trial funded by DOD Pending Data Readout |
| NRX-101™                   | Chronic Nociceptive Pain   |         |         |     | IND Approved   Applied to NIH EPICNET & HEAL                     |
| <u>PTSD</u>                |  |         |         |     |  |
| NRX-101™                   | PTSD   |         |         |     | Nonclinical Evidence   Clinical Planning                         |
| <u>Complicated UTI</u>     |  |         |         |     |  |
| NRX-101™                   | Complicated UTI incl. Pyelonephritis   |         |         |     | In Vitro Data   QIDP and Fast Track granted                      |

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**

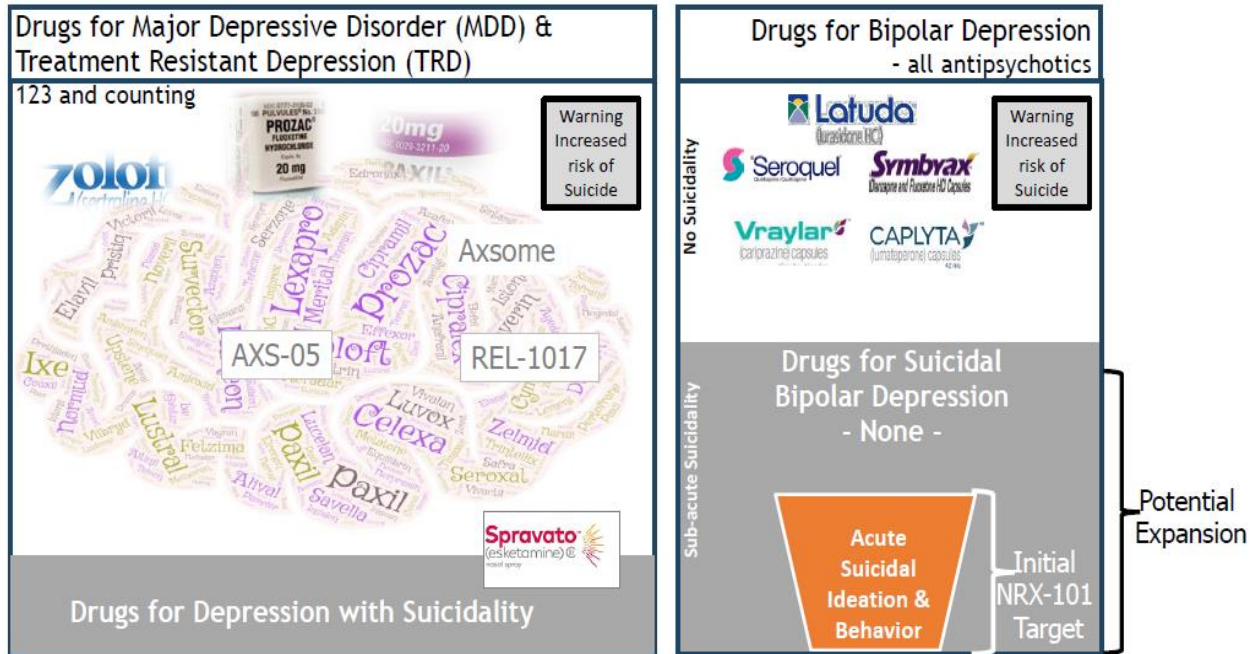
Patients in clinics and outpatient being treated for Bipolar Depression with Suicidality



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 Suicidality – though overlapping is not the same**

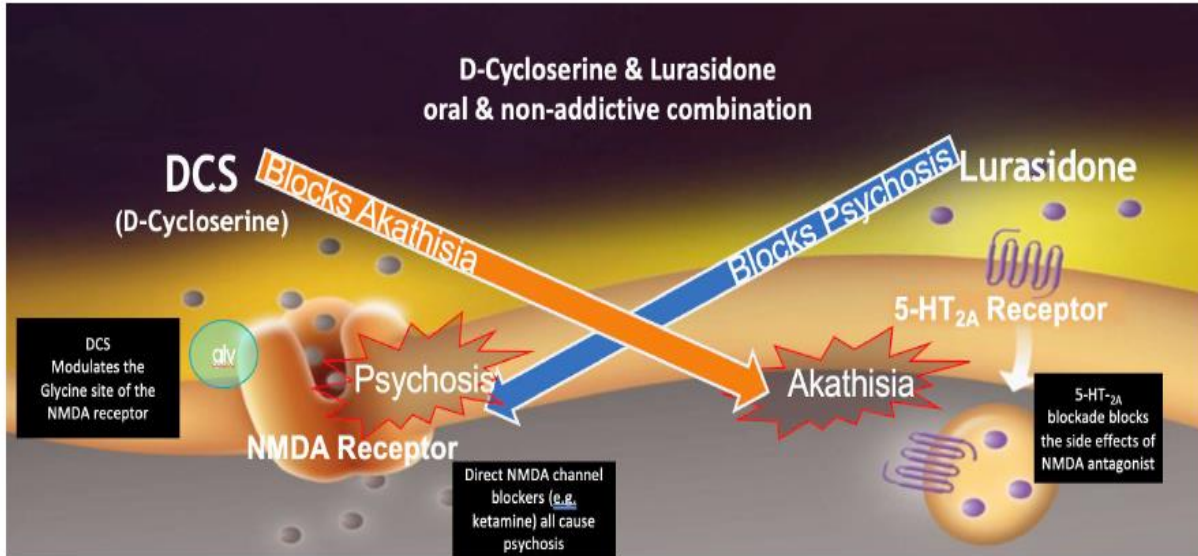
| Depression with Suicidality   | Implications for Bipolar Depression with Suicidality   |
|---|--|
| <ul style="list-style-type: none"> <li>• Antidepressants (5HT2a / SSRIs) can increase suicidality – suicidality routinely an exclusion in depression studies</li> <li>• NMDA antagonists (ketamine) can stabilize depression and suicidality –               <ul style="list-style-type: none"> <li>• Suicidality 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 suicidality of depressive disorders ~ 50% attempt suicide</li> <li>• Available drugs improve depression but can increase suicidality</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 Suicidality</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.

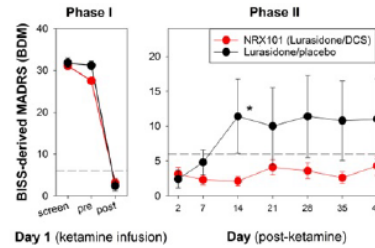


**Exhibit 10: Phase 2 Study of D-Cycloserine in Depression / Suicidality Conclusions**

**Phase 2 Success: STABIL-B trial Showed Superiority of NRX-101 vs Lurasidone in Reducing Depression (primary endpoint) after Ketamine Pre-treatment**

Patients received one infusion of IV ketamine vs. placebo. Responders were randomized to NRX-101 vs lurasidone, a Standard of Care

- Mean 7.7 point benefit on MADRS (Primary Endpoint, P=.03) through day 42 vs. lurasidone.
- 40% relapse in control group, no relapse in NRX-101 group (P=.07)
- 1.5 point advantage vs SoC on Columbia Suicide Severity Rating Scale (C-SSRS) (P=.02)
- Decreased akathisia in the NRX-101 group on the BARS akathisia scale (P=.14)



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

Source: Company reports.

**Exhibit 11: NRX-101 Phase 2b/3 Clinical Trial Program (SSIB & ASIB) Conclusions**

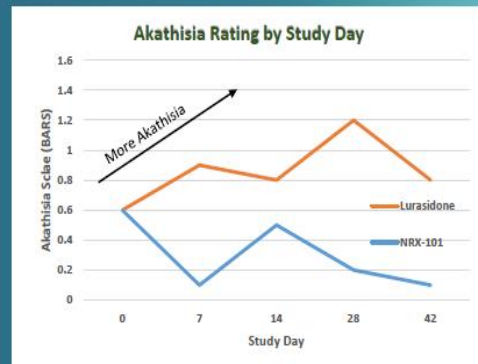
**NRX-101 demonstrates reduced Akathisia and Time to Suicidality Remission in Suicidal Bipolar Depression: No Ketamine Pre-treatment**

Phase 2b/3, randomized, double blind trial on NRX-101 vs Standard of Care (SoC) (lurasidone) in Suicidal Treatment Resistant Bipolar Depression (S-TRBD), n=74

- Similar (50% reduction) in depression vs. SoC
- Significant reduction in akathisia vs. SoC, p=0.03
- Time to Sustained Remission from Suicidality (C-SSRS ≤3) vs. SoC, p=0.05

➤ We believe an antidepressant with Standard of Care level efficacy and a significant reduction in akathisia / suicidality vs SoC will become the new standard in bipolar depression

➤ We believe NRX-101 can be that medication



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

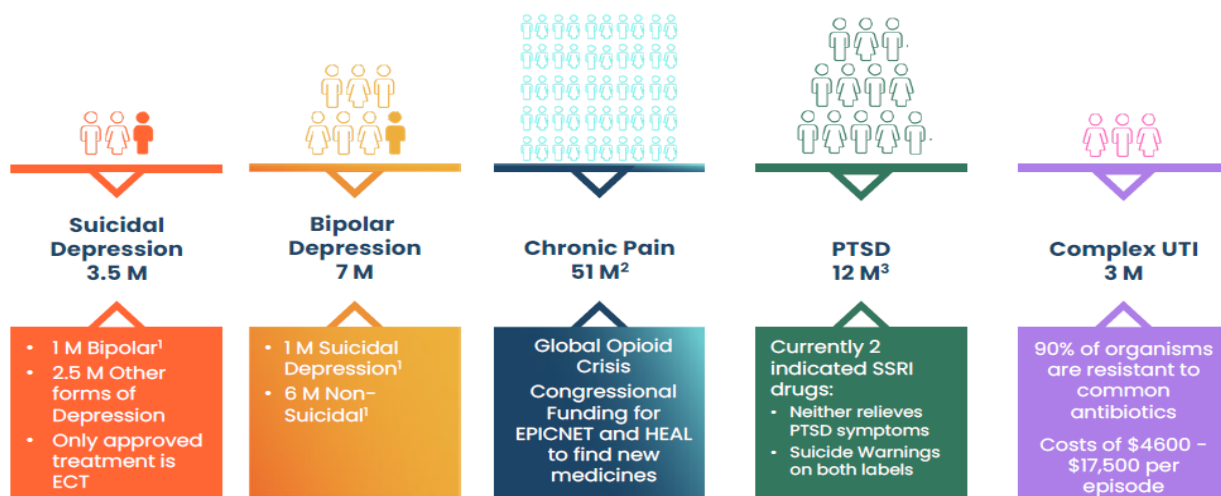
Exploring expansion in earlier population

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

Source: Company reports.

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

**Potential to Reach 75 Million Lives**



Source: Company reports.

Exhibit 14: NRX-100 (IV Ketamine)

**NRX-100 (IV Ketamine)  
for Suicidal Depression**

**Aiming to be the first  
FDA-approved ketamine  
product to treat  
suicidal depression**



**Everyone is calling for approval of Ketamine  
Why is IV Ketamine not approved for depression?**

- 1** No Company has applied for FDA approval of IV Ketamine to treat depression
- 2** No other Company has announced manufacture completion (i.e. FDA Module 3) of an IV Ketamine formulation targeted for the treatment of suicidal depression
- 3** No other Company has announced patient-level efficacy data demonstrating the effectiveness of IV ketamine in the treatment of suicidal depression
- 4** No other Company has announced completion of FDA-required neurotoxicity data in support of an application to treat patients with IV ketamine
- 5** No other Company has announced 12 month real-time stability data associated with a formulation of ketamine to treat suicidal depression

**NRx Pharmaceuticals has achieved those milestones and expects to file an NDA under Fast Track designation this year**



**NRx Has Toxicity and Manufacturing Data in Support of NDA**

- 1** NRx met with FDA on neurotoxicity protocol in 2016 – Data were accepted
- 2** 2023: NRx implemented formulation of preservative-free Ketamine
- 3** 2023: First stability batch in BFS (no glass) with modern container closure
- 4** 2024: Initial manufacturing completion of first preservative-free formulation
- 5** Ketamine for anesthesia is on drug shortage and existing suppliers are under pressure to limit supply to approved uses

**FDA has advised NRx that nonclinical requirements were met**

Source: Company reports.

## Exhibit 15: HOPE Therapeutics

### HOPE Therapeutics: Why Spin Out a Separate Company? Expected 2025 profitability

- 1 NRx is a Biotechnology company focused on Research and Development  
**HOPE** is a Care Delivery company focused on Interventional Psychiatry and digital therapeutics
- 2 Focus on TMS and Digital Therapeutics in addition to ketamine and oral meds
- 3 Insurance-reimbursable: transforms a “cash and carry” market
- 4 Immediate sales of Ketamine under 503b pharmacy license by mid-2024  
Development of HTX-100 (pH neutral Ketamine) – improved formulation
- 5 Financing independent of NRXP: equity and bond issuance

### No FDA-Approved Medication today for Acute Suicidality

Only FDA-approved therapy is  
Electro-Convulsive Therapy  
(ECT)



IV Ketamine is used off-label  
But not FDA-approved  
Not reimbursed by Payers  
Inconsistent in quality



### Hope Therapeutics Near-Term Investor Highlights: *Make Good Clinics Great*

- Acquisition and management of ~30+ Ketamine clinics through 2025
  - Target \$100 million/yr run-rate with positive EBITDA
  - Starting with industry-leading mental health practices that set the standard and scale for future acquisitions; ongoing revenue and positive EBITDA
  - **Make good clinics great:** increase revenues via offerings and access, grow EBITDA via product mix, efficiencies and operational optimization
- Disciplined financing strategy
  - Clinic acquisition:
    - Market EBITDA multiples with performance based earn-outs
    - Cash via corporate bonds and/or other debt financing expected
  - IPO: planned as the company begins to scale & generate meaningful revenue
- Building shareholder value
  - Market value of clinics is largely based on EBITDA multiples
    - **Growing total EBITDA, via increased integration of services, directly enhances shareholder value; debt financing avoids dilution**

Source: Company reports.

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Exhibit 16: Q3 2024 Results and Recent Business Highlights (as of November 14, 2024)

### **NRx Pharmaceuticals (NASDAQ:NRXP) Reports Third Quarter and Year to Date 2024 Financial Results and Provides Business Update**

- *On track to file New Drug Applications (NDAs) for NRX-100 (IV Ketamine) in treating suicidal ideation in depression, including bipolar depression and NRX-101 (Oral D-Cycloserine/Lurasidone) for Accelerated Approval in bipolar depression with suicidality or akathisia by year end 2024 with 2025 PDUFA date forecast.*
- *HOPE Therapeutics acquiring Interventional Psychiatry Clinics; key to developing a best-in-class network of care to prevent suicide, continues to expect first revenue by year-end 2024.*
- 74% reduction in net operating losses compared to 3<sup>rd</sup> quarter 2023 with profitability forecast in 2025 from HOPE Therapeutics and from sales of medication.
- *Management to host a conference call November 18, 2024 at 4:30 PM ET*

WILMINGTON, Del., Nov. 14, 2024 /PRNewswire/ -- NRx Pharmaceuticals, Inc. (Nasdaq: NRXP) ("NRx Pharmaceuticals", the "Company"), a clinical-stage biopharmaceutical company, today announced its financial results for the quarter and year to date ended September 30, 2024 and provided a business update.

#### Key Clinical and Business Activities

- NRX-100 (IV Ketamine) safety and efficacy data have been aggregated from clinical trials in more than 500 patients in collaboration with leading US and French Universities that demonstrate a highly significant reduction in suicidal ideation compared to placebo and active comparator. IV ketamine has been shown to be superior (in post-hoc analysis) to electroshock therapy in treating depression. Stability data has now been generated for three manufacturing lots required for NDA filing in suicidal depression, toxicology data are complete, and alignment with the FDA on its Pediatric Study Plan has been received. If approved, NRX-100 would be the world's first medicine to treat acute suicidality, a condition that kills 1 American every 11 minutes, according to the US Centers for Disease Control.
- NRX-101 NDA for accelerated approval in bipolar depression with suicidality or akathisia advancing, based on data from the Phase 2b/3 trial in suicidal patients with bipolar depression, which demonstrated depression efficacy comparable to standard of care and significant reduction of akathisia (P=0.025) and time to sustained remission from suicidality (P=.05). These data, along with data from our STABIL-B trial, support a possible best-in-class suicidal bipolar depression medication profile. This is a multi-billion-dollar market in the US.
- HOPE Therapeutics, the Company's wholly owned subsidiary, announced signing of two Letters of Intent (LOI) to acquire foundational Interventional Psychiatric Clinics, a key to developing a best-in-class network of clinics that offer a complete range of lifesaving therapies to patients with suicidal depression and PTSD. These are revenue generating, EBITDA positive acquisitions.
- Secured \$10.8 million in convertible-debt funding from an institutional investor; funds targeted to support FDA New Drug Applications for NRX-100 (ketamine) and NRX-101 and retirement of prior debt. Funding at a reduced interest rate, conversion discount, and other financial terms compared to prior debt.
- Retired Streeterville debt and settlement of litigation at a substantial discount.

Source: Company reports.

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Exhibit 17: Positive Phase 2b/3 Clinical Trial (May 6, 2024)

## Safety Combined with Similar Efficacy in the Trial of NRX-101 Compared to Lurasidone in Suicidal Bipolar Depression



- Both drugs demonstrated > 50% response for treating depression. NRX-101 demonstrated a mean 76% reduction in symptoms of akathisia compared to lurasidone that was sustained over 42 days (Effect Size .37; P=0.025), using prespecified analytic methodology memorialized in FDA Special Protocol Agreement. Levels of akathisia with NRX-101 were essentially zero at day 42
- This safety advantage was previously reported in the Company's published STABIL-B trial
- Akathisia is identified as a life-threatening side effect of nearly all antidepressants, reported in 10-15% of treated patients and is closely linked to suicide in FDA black box warning
- Akathisia was seen in 2% of participants treated with NRX-101 vs. 11% treated with lurasidone
- Company plans to seek accelerated approval of NRX-101 for use in patients with bipolar depression at risk of akathisia while continuing to broaden the indication to all patients with bipolar depression and perhaps schizophrenia
- Study will be presented at the American Society of Clinical Psychopharmacology (ASCP) meeting May 28-31, 2024 (Miami) together with study investigators, accompanied by a broadcast scientific presentation on akathisia and antidepressant safety, and investor Q&A

### Commonly heard

**"But the recent trial did not meet its primary endpoint..."**

- The trial did not demonstrate a superior antidepressant effect vs. a leading antidepressant (i.e. the declared primary efficacy endpoint)
- The trial did meet both primary (suicidality) and secondary (akathisia) pre-declared safety endpoints at a statistically-significant level and confirms the findings of two prior trials in this regard
- This provides a basis to file for time-limited (5 year) accelerated approval for patients who have no therapeutic alternative. During that period, the sponsor is required to provide confirmatory evidence of sustained benefit

Source: Company reports.

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**Exhibit 18: Near Term Catalysts and Outlook (as of November 14, 2024)**

**Key Upcoming 2024 Milestones**

- NRX-100 New Drug Application (NDA) filing for treatment of suicidal ideation in depression, including bipolar depression, based on data from four clinical trials in more than 500 participants demonstrating highly significant efficacy compared to placebo and active comparator, together with a 420-person non-inferiority trial compared to electroshock therapy planned to be filed in 2024.
- Company plans to file a New Drug Application (NDA) for Accelerated Approval under Breakthrough Therapy Designation and Priority Review of NRX-101 (D-cycloserine+lurasidone) in treatment of bipolar depression in people akathisia or suicidality, based on the Phase 2b/3 and STABIL-B data in 2024. Akathisia is considered a lethal condition and there is no approved product for this indication.
- HOPE Therapeutics continuing to build its nationwide network of Interventional Psychiatry Clinics; the company is planned to be spun out as a separate entity to be owned by NRx, current NRx shareholders, and new investors.
- NRx continues to forecast first corporate revenues by year-end 2024 with profitability forecast in 2025.

Source: Company reports.

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**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 November 14, 2024)**

|              | Revenue (mils) |              |              | EPS              |                  |
|--------------|----------------|--------------|--------------|------------------|------------------|
|              | 2024E          | 2025E        |              | 2024E            | 2025E            |
| Q1 Mar       | \$0A           |              | Q1 Mar       | \$(0.74)A        |                  |
| Q2 Jun       | \$0A           |              | Q2 Jun       | \$(0.75)A        |                  |
| Q3 Sep       | \$0E           |              | Q3 Sep       | \$(0.73)E        |                  |
| Q4 Dec       | \$0E           |              | Q4 Dec       | \$(0.78)E        |                  |
| <b>Total</b> | <b>\$0E</b>    | <b>\$20E</b> | <b>Total</b> | <b>\$(3.04)E</b> | <b>\$(1.67)E</b> |

\*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            | Q1A             | Q2A             | Q3A             | 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>5.0</b>      | <b>10.0</b>     | <b>20.0</b>   | <b>25.0</b>   | <b>60.0</b>   |
| <u>Cost of Revenues</u>                 | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>2.5</u>      | <u>5.0</u>      | <u>7.5</u>    | <u>10.0</u>   | <u>25.0</u>   |
| 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             | 2.5             | 5.0             | 12.5          | 15.0          | 35.0          |
| Research & development                  | 5.5             | 3.0             | 4.1             | 4.5             | 17.0            | 3.7             | 3.9             | 3.3             | 2.5             | 13.4            | 1.7             | 2.8             | 0.6             | 1.0             | 6.2             | 1.0             | 1.0             | 1.0           | 1.0           | 4.0           |
| General and administrative              | 10.2            | 6.6             | 5.0             | 5.5             | 27.4            | 5.8             | 4.1             | 2.5             | 1.9             | 14.2            | 4.3             | 4.2             | 2.4             | 3.5             | 14.4            | 6.0             | 6.3             | 8.0           | 9.0           | 29.3          |
| <u>Restructuring and other</u>          |                 |                 |                 |                 | <u>0.0</u>      |                 | <u>0.3</u>      |                 |                 | <u>0.3</u>      |                 |                 |                 |                 | <u>0.0</u>      |                 |                 |               |               | <u>0.0</u>    |
| Total operating expenses                | 15.7            | 9.6             | 9.1             | 10.0            | 44.4            | 9.4             | 8.2             | 5.8             | 4.4             | 27.8            | 6.0             | 7.1             | 3.0             | 4.5             | 20.6            | 7.0             | 7.3             | 9.0           | 10.0          | 33.3          |
| <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>(6.0)</b>    | <b>(7.1)</b>    | <b>(3.0)</b>    | <b>(4.5)</b>    | <b>(20.6)</b>   | <b>(4.5)</b>    | <b>(2.3)</b>    | <b>3.5</b>    | <b>5.0</b>    | <b>1.7</b>    |
| Interest income (expense)               | (0.0)           | 0.0             | 0.1             | 0.1             | 0.2             | 0.2             | 0.1             | 0.1             | (0.0)           | 0.4             | (0.2)           | 0.0             | 0.0             | (0.2)           | (0.4)           | (0.3)           | (0.3)           | (0.3)         | (0.3)         | (1.4)         |
| <u>Other income (expense)</u>           | <u>2.3</u>      | <u>2.6</u>      | <u>(0.0)</u>    | <u>(0.5)</u>    | <u>4.3</u>      | <u>(1.8)</u>    | <u>(0.7)</u>    | <u>(0.3)</u>    | <u>0.1</u>      | <u>(2.7)</u>    | <u>(0.3)</u>    | <u>(0.9)</u>    | <u>1.4</u>      | <u>0.0</u>      | <u>0.2</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>    | <u>0.0</u>    | <u>0.0</u>    |
| Income before income taxes              | (13.4)          | (7.0)           | (9.1)           | (10.3)          | (39.8)          | (11.0)          | (8.7)           | (6.1)           | (4.3)           | (30.2)          | (6.5)           | (7.9)           | (1.6)           | (4.7)           | (20.8)          | (4.8)           | (2.6)           | 3.2           | 4.7           | 0.3           |
| <u>Income taxes</u>                     |                 |                 |                 |                 | <u>0.0</u>      |                 |                 |                 |                 | <u>0.0</u>      |                 |                 |                 |                 | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>      | <u>0.0</u>    | <u>0.0</u>    | <u>0.0</u>    |
| Net income (loss)                       | (13.4)          | (7.0)           | (9.1)           | (10.3)          | (39.8)          | (11.0)          | (8.7)           | (6.1)           | (4.3)           | (30.2)          | (6.5)           | (7.9)           | (1.6)           | (4.7)           | (20.8)          | (4.8)           | (2.6)           | 3.2           | 4.7           | 0.3           |
| <u>Nonrecurring/noncash adjustments</u> |                 |                 |                 |                 | <u>0.0</u>      |                 |                 |                 |                 | <u>0.0</u>      |                 |                 |                 |                 | <u>0.0</u>      |                 |                 |               |               | <u>0.0</u>    |
| <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>(6.5)</b>    | <b>(7.9)</b>    | <b>(1.6)</b>    | <b>(4.7)</b>    | <b>(20.8)</b>   | <b>(4.8)</b>    | <b>(2.6)</b>    | <b>3.2</b>    | <b>4.7</b>    | <b>0.3</b>    |
| EBITDA                                  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| Shares, Basic                           | 6.4             | 6.6             | 6.6             | 6.8             | 6.6             | 6.7             | 7.3             | 8.2             | 8.2             | 7.6             | 8.9             | 10.5            | 11.0            | 12.1            | 10.6            | 12.2            | 12.3            | 12.4          | 12.5          | 12.4          |
| Shares, Diluted                         | 6.4             | 6.6             | 6.6             | 6.8             | 6.6             | 6.7             | 7.3             | 8.2             | 8.2             | 7.6             | 8.9             | 10.5            | 11.0            | 12.1            | 10.6            | 12.2            | 12.3            | 12.4          | 12.5          | 12.4          |
| EPS Basic (pro forma)                   | (\$2.11)        | (\$1.06)        | (\$1.37)        | (\$1.53)        | (\$6.05)        | (\$1.64)        | (\$1.19)        | (\$0.74)        | (\$0.53)        | (\$3.98)        | (\$0.74)        | (\$0.75)        | (\$0.15)        | (\$0.39)        | (\$1.96)        | (\$0.40)        | (\$0.22)        | \$0.25        | \$0.37        | \$0.02        |
| <b>EPS Diluted (pro forma)</b>          | <b>(\$2.11)</b> | <b>(\$1.06)</b> | <b>(\$1.37)</b> | <b>(\$1.53)</b> | <b>(\$6.05)</b> | <b>(\$1.64)</b> | <b>(\$1.19)</b> | <b>(\$0.74)</b> | <b>(\$0.53)</b> | <b>(\$3.98)</b> | <b>(\$0.74)</b> | <b>(\$0.75)</b> | <b>(\$0.15)</b> | <b>(\$0.39)</b> | <b>(\$1.96)</b> | <b>(\$0.40)</b> | <b>(\$0.22)</b> | <b>\$0.25</b> | <b>\$0.37</b> | <b>\$0.02</b> |
| <b>Margins</b>                          |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| Gross margin                            |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| Research & development                  |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| General and administrative              |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| Operating margin                        |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| Tax rate, GAAP                          |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| Net margin                              |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| <b>YY % change</b>                      |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| Total Revenue                           |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| Gross margin                            |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |                 |               |               |               |
| Research & development                  | 88%             | -37%            | -34%            | -31%            | -16%            | -33%            | 31%             | -20%            | -43%            | -21%            | -52%            | -28%            | -82%            | -61%            | -54%            | -43%            | -64%            | 64%           | 0%            | -35%          |
| General and administrative              | 387%            | -47%            | -64%            | -88%            | -63%            | -43%            | -39%            | -50%            | -66%            | -48%            | -27%            | 4%              | -3%             | 87%             | 1%              | 41%             | 48%             | 232%          | 157%          | 103%          |
| Operating income (loss)                 | -39%            | -44%            | -55%            | -81%            | -62%            | -40%            | -15%            | -36%            | -56%            | -37%            | -36%            | -14%            | -48%            | 2%              | -26%            | -25%            | -67%            | -216%         | -211%         | -108%         |
| Net income (loss)                       | -47%            | -97%            | -56%            | -78%            | -89%            | -18%            | 25%             | -33%            | -58%            | -24%            | -41%            | -9%             | -73%            | 9%              | -31%            | -26%            | -66%            | -294%         | -199%         | -101%         |
| EPS Diluted (pro forma)                 | -70%            | -98%            | -66%            | -81%            | -92%            | -23%            | 12%             | -46%            | -65%            | -34%            | -55%            | -37%            | -80%            | -27%            | -51%            | -46%            | -71%            | -272%         | -196%         | -101%         |

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           | Q1A           | Q2A           | Q3A           | 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           | 1.3           | 1.9           | 1.6           | 1.0           | 1.7           | 1.2           | 4.5           | 9.2           |
| Short term investments                            |             |             |             |             |              |              |              |               |               |               |               | 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           |
| Prepaid expenses and other                        | 3.4         | 7.9         | 6.6         | 5.7         | 5.3          | 4.8          | 4.2          | 2.3           | 2.0           | 3.0           | 2.5           | 2.5           | 2.5           | 2.5           | 2.5           | 2.5           |
| Total current assets                              | 43.6        | 32.4        | 24.8        | 25.8        | 21.8         | 19.8         | 13.1         | 6.9           | 3.3           | 4.9           | 4.1           | 3.5           | 4.1           | 3.6           | 6.9           | 11.7          |
| Property and equipment, net                       |             |             |             |             |              |              |              |               |               |               |               | 0.0           | 0.0           | 0.0           | 0.0           | 0.0           |
| Intangibles, net                                  |             |             |             |             |              |              |              |               |               |               |               | 0.0           | 0.0           | 0.0           | 0.0           | 0.0           |
| Deferred income tax                               |             |             |             |             |              |              |              |               |               |               |               | 0.0           | 0.0           | 0.0           | 0.0           | 0.0           |
| Other   | 0.0         | 0.0         | 0.0         | 0.0         | 0.0          | 0.0          | 0.4          | 0.4           | 0.4           | 0.4           | 0.4           | 0.4           | 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>3.8</b>    | <b>5.3</b>    | <b>4.5</b>    | <b>3.8</b>    | <b>4.1</b>    | <b>3.6</b>    | <b>6.9</b>    | <b>11.7</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           | 6.3           | 5.0           | 4.9           | 4.9           | 4.9           | 4.9           | 4.9           | 4.9           |
| Accrued expenses                                  | 4.5         | 4.0         | 5.8         | 5.8         | 6.1          | 6.9          | 5.3          | 5.2           | 5.8           | 10.0          | 9.8           | 9.8           | 9.8           | 9.8           | 9.8           | 9.8           |
| Deferred income tax                               |             |             |             |             |              |              |              |               |               |               |               | 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           | 1.9           | 1.9           | 1.9           | 1.9           | 1.9           | 1.9           |
| Other   | 2.5         |             |             |             |              | 0.8          | 0.3          |               |               |               | 0.6           | 0.6           | 0.6           | 0.6           | 0.6           | 0.6           |
| Short term debt                                   | 0.5         |             |             | 8.7         | 12.2         | 12.7         | 10.1         | 9.2           | 6.8           | 8.6           | 3.1           | 7.0           | 7.0           | 7.0           | 7.0           | 7.0           |
| <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>18.9</b>   | <b>23.7</b>   | <b>20.3</b>   | <b>24.2</b>   | <b>24.2</b>   | <b>24.2</b>   | <b>24.2</b>   | <b>24.2</b>   |
| Deferred income taxes                             |             |             |             |             |              |              |              |               |               |               |               | 0.0           | 0.0           | 0.0           | 0.0           | 0.0           |
| Warrant liabilities                               |             |             |             |             |              |              |              |               |               |               |               | 0.0           | 0.0           | 0.0           | 0.0           | 0.0           |
| Other long term liabilities                       |             |             |             |             |              |              |              |               |               |               |               | 0.0           | 5.0           | 7.0           | 7.0           | 7.0           |
| Long term debt                                    |             |             |             | 1.8         |              |              |              |               |               |               | 3.0           | 3.0           | 3.0           | 3.0           | 3.0           | 3.0           |
| <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>0.0</b>    | <b>0.0</b>    | <b>3.0</b>    | <b>3.0</b>    | <b>8.0</b>    | <b>10.0</b>   | <b>10.0</b>   | <b>10.0</b>   |
| Preferred stock                                   |             |             |             |             |              |              | 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           | 0.0           | 0.0           | 0.0           | 0.2           | 0.3           | 0.4           | 0.6           | 0.7           |
| Additional paid-in capital                        | 228.3       | 229.0       | 229.5       | 230.4       | 233.6        | 239.9        | 242.5        | 241.3         | 244.6         | 249.2         | 250.4         | 250.4         | 250.4         | 250.4         | 250.4         | 250.4         |
| Retained earnings                                 | (196.7)     | (203.7)     | (212.8)     | (223.1)     | (234.0)      | (242.8)      | (248.8)      | (253.1)       | (259.7)       | (267.6)       | (269.2)       | (273.9)       | (278.8)       | (281.4)       | (278.3)       | (273.6)       |
| Other   |             |             |             |             |              |              |              |               |               |               |               | 0.0           | 0.0           | 0.0           | 0.0           | 0.0           |
| 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           |
| <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>(15.1)</b> | <b>(18.4)</b> | <b>(18.8)</b> | <b>(23.4)</b> | <b>(28.1)</b> | <b>(30.6)</b> | <b>(27.3)</b> | <b>(22.5)</b> |
| <b>Total stockholders' equity and liabilities</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>3.8</b>    | <b>5.3</b>    | <b>4.5</b>    | <b>3.8</b>    | <b>4.1</b>    | <b>3.6</b>    | <b>6.9</b>    | <b>11.7</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   |
|--|--------|--------|--------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
|  | Q1A    | Q2A    | Q3A    | Q4A    | Q1A      | Q2A      | Q3A      | Q4A      | Q1A      | Q2A      | Q3A      | Q4E      | Q1E      | Q2E      | Q3E      | Q4E      |
| <b>Book &amp; Cash Value (per share)</b> |        |        |        |        |          |          |          |          |          |          |          |          |          |          |          |          |
| Book Value per Share (diluted)           | \$4.98 | \$3.86 | \$2.53 | \$1.10 | (\$0.04) | (\$0.38) | (\$0.76) | (\$1.43) | (\$1.70) | (\$1.75) | (\$1.72) | (\$1.93) | (\$2.30) | (\$2.49) | (\$2.20) | (\$1.80) |
| Cash per Share (diluted)                 | \$6.31 | \$3.73 | \$2.75 | \$2.97 | \$2.45   | \$2.04   | \$1.09   | \$0.56   | \$0.15   | \$0.18   | \$0.15   | \$0.08   | \$0.14   | \$0.09   | \$0.36   | \$0.74   |
| Net cash per Share (diluted)             | \$6.23 | \$3.73 | \$2.75 | \$1.41 | \$0.64   | \$0.31   | (\$0.14) | (\$0.56) | (\$0.62) | (\$0.64) | (\$0.40) | (\$0.74) | (\$0.68) | (\$0.72) | (\$0.45) | (\$0.06) |

Source: Company reports and Ascendant Capital Markets estimates

**NRx Pharmaceuticals, Inc.**

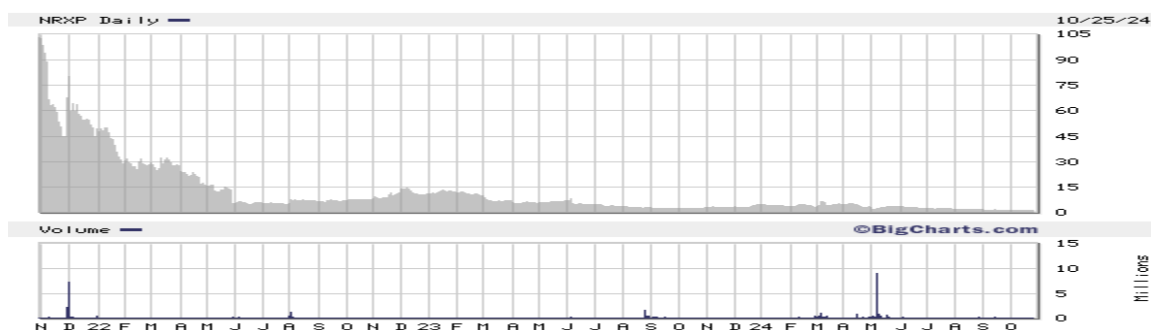
| Cash Flow Statement (\$ mils)                | Mar-22        | Jun-22        | Sep-22       | Dec-22       | 2022          | Mar-23       | Jun-23       | Sep-23       | Dec-23       | 2023          | Mar-24       | Jun-24       | Sep-24       | Dec-24       | 2024          | Mar-25     | Jun-25       | Sep-25       | Dec-25       | 2025         |       |
|--|---------------|---------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|--------------|---------------|------------|--------------|--------------|--------------|--------------|-------|
| Fiscal Year End: December 31                 | Q1A           | Q2A           | Q3A          | Q4A          | FY-A          | Q1A          | Q2A          | Q3A          | Q4A          | FY-A          | Q1A          | Q2A          | Q3A          | 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)        | (6.5)        | (7.9)        | (1.6)        | (4.7)        | (20.8)        | (4.8)      | (2.6)        | 3.2          | 4.7          | 0.3          |       |
| 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          | 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           |              |              | 0.5          |              | 0.5           |            |              |              |              |              | 0.0   |
| Stock comp                                   | 1.3           | 1.0           | 0.5          | 0.8          | 3.6           | 0.7          | 0.5          | 0.4          | (1.2)        | 0.4           | 0.2          | 0.1          | 0.1          | 0.1          | 0.6           | 0.1        | 0.1          | 0.1          | 0.1          |              | 0.6   |
| Deferred income taxes                        |               |               |              |              | 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           | 0.3          | 2.2          | (3.7)        |              | (1.2)         |            |              |              |              |              | 0.0   |
| Change in fair value of earnout c            | (2.1)         | (2.5)         |              |              | (4.6)         |              |              |              |              |               |              |              | 1.3          |              | 1.3           |            |              |              |              |              | 0.0   |
| Writedowns and impairments                   |               |               |              |              | 0.0           |              |              |              |              | 0.0           |              |              |              | 0.8          | 0.8           |            |              |              |              |              | 0.0   |
| Other gains/losses                           |               |               |              |              | 0.0           |              | 0.3          |              |              | 0.3           |              |              | 0.1          |              | 0.1           |            |              |              |              |              | 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           | 0.3          | (0.9)        | 0.5          |              | (0.1)         |            |              |              |              |              | 0.0   |
| Income tax                                   |               |               |              |              | 0.0           |              |              |              |              | 0.0           |              |              |              |              | 0.0           |            |              |              |              |              | 0.0   |
| Other assets                                 |               |               |              |              | 0.0           |              |              |              |              | 0.0           |              |              |              | 0.0          | 0.0           | 0.4        | 0.0          | 0.0          | 0.0          |              | 0.4   |
| Accounts payable                             | 0.6           | (1.2)         | (0.9)        | (0.1)        | (1.6)         | 1.7          | (1.6)        | 1.5          | 1.0          | 2.7           | 2.1          | 2.1          | 0.7          |              | 4.9           |            |              |              |              |              | 0.0   |
| Accrued expenses                             | 1.6           | (0.5)         | 1.8          | (0.0)        | 2.9           | 0.3          | 0.6          | (1.3)        | (0.1)        | (0.5)         | (0.1)        | 0.9          | (0.2)        |              | 0.6           |            |              |              |              |              | 0.0   |
| Other liabilities                            |               |               |              |              | 0.0           |              |              |              |              | 0.0           |              | 0.9          | (1.0)        | 0.0          | (0.1)         | 5.0        | 2.0          | 0.0          | 0.0          |              | 7.0   |
| <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>(3.7)</b> | <b>(2.6)</b> | <b>(2.3)</b> | <b>(4.6)</b> | <b>(13.1)</b> | <b>0.6</b> | <b>(0.5)</b> | <b>3.3</b>   | <b>4.8</b>   | <b>8.2</b>   |       |
| <b>Cash flow from investing activities</b>   |               |               |              |              |               |              |              |              |              |               |              |              |              |              |               |            |              |              |              |              |       |
| Purchases of property and equi               | (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           |              |              | 2.9          | 4.0          | 6.9           | 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)         | (2.2)        | (0.0)        | (3.2)        |              | (5.3)         |            |              |              |              |              | 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           | 2.6          | 3.1          | 0.2          | 0.0          | 5.9           | 0.0        | 0.0          | 0.0          | 0.0          |              | 0.0   |
| Proceeds from stock option exercises         |               |               |              | 0.0          | 0.0           |              |              |              |              | 0.0           |              |              | 2.1          |              | 2.1           |            |              |              |              |              | 0.0   |
| Other  |               |               |              |              | 0.0           |              |              |              |              | 0.0           |              |              |              |              | 0.0           |            |              |              |              |              | 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>0.4</b>   | <b>3.1</b>   | <b>2.1</b>   | <b>4.0</b>   | <b>9.5</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>(3.3)</b> | <b>0.6</b>   | <b>(0.3)</b> | <b>(0.6)</b> | <b>(3.6)</b>  | <b>0.6</b> | <b>(0.5)</b> | <b>3.3</b>   | <b>4.8</b>   | <b>8.2</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>1.3</b>   | <b>1.9</b>   | <b>1.6</b>   | <b>4.6</b>    | <b>1.0</b> | <b>1.7</b>   | <b>1.2</b>   | <b>4.5</b>   | <b>1.0</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>1.3</b>   | <b>1.9</b>   | <b>1.6</b>   | <b>1.0</b>   | <b>1.0</b>    | <b>1.7</b> | <b>1.2</b>   | <b>4.5</b>   | <b>9.2</b>   | <b>9.2</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 | Report Date | Rating | Price 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        |
| 7      | 5/4/2024    | B      | 50.00        |
| 8      | 6/6/2024    | B      | 43.00        |
| 9      | 9/11/2024   | B      | 44.00        |

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Risks to attainment of our share price target include balance sheet/liquidity risks, failure of product candidates to demonstrate safety and efficacy in clinical trials, failure to gain regulatory approvals, ability to commercialize product, failure to obtain suitable reimbursement, competition, changing macroeconomic factors, investor sentiment for investing in biotech stocks, and changes in consumer or government priorities for healthcare.

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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 October 11, 2024)

| Rating | Count | Percent | Investment Banking Services<br>Past 12 months |         |
|--------|-------|---------|---|---------|
|        |       |         | Count   | Percent |
| Buy    | 58    | 98%     | 25  | 43%     |
| Hold   | 0     | 0%      | 0   | 0%      |
| Sell   | 1     | 2%      | 0   | 0%      |
| Total  | 59    | 100%    | 25  | 42%     |

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