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NRx Pharmaceuticals, Inc. (NRXP) – Buy Rating and \$3.0 Price Target

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NRx has two goals – Preventing suicide and treating depression. There are no approved therapeutics for the treatment of people with bipolar depression and acute / sub-acute suicidality. NRx is working to bring the first NMDA-targeted drug engineered to eliminate the typical side effects (hallucinations and neurotoxicity) while maintaining efficacy. Success in one indication opens multiple others too.

Investment Highlights

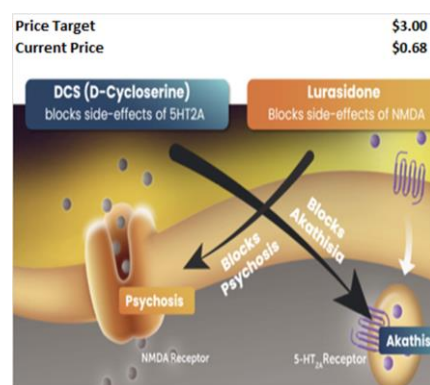
What is NRX-101? It is a fixed dose combination of D-Cycloserine, an NMDA antagonist, and lurasidone, a 5-HT_{2A} atypical antipsychotic and antidepressant, for the maintenance of remission from severe bipolar depression following initial stabilization with ketamine. The combination has Fast Track and Breakthrough Therapy designations, a Special Protocol Agreement, and a Biomarker Letter of Support by the FDA. NRx is also looking to use NRX-101 to help treat patients with PTSD suicidality, as the NMDA component of NRX-101 (D-Cycloserine) is known to reduce Fear Memory, which is a driver of PTSD symptoms. NRX-101 is covered by multiple U.S. and foreign patents, including a Composition of Matter patent.

NRX-100 and NRX-101: NMDA-targeted medicines designed to address both depression and suicidal ideation. NRX-101 is a fixed dose combination of D-cycloserine and lurasidone. NRX-101 has been granted Fast Track Designation, Breakthrough Therapy Designation, and a Special Protocol Agreement (SPA) by the FDA for the treatment of severe bipolar depression in patients with Acute Suicidal Ideation and Behavior (ASIB) after initial stabilization with ketamine or other effective therapy.

Timeline: A registrational study of NRX-101 for severe bipolar depression in patients with ASIB after initial stabilization with ketamine (NRX-100), using newly manufactured commercial level material, is underway. The company is also looking at a phase 2 study for bipolar depression with sub-acute suicidal ideation and behavior (SSIB). In addition the company is evaluating the potential of NRX-101 in Post-traumatic stress disorder (PTSD), another area of high unmet need which is also associated with suicidality. NRX-100 is ketamine, which is a generic anesthetic, that is being used off-label in psychiatry. NRX-100 is part of a regimen of two sequential studies that the company has agreed to with the FDA as part of a special protocol assessment for NRX-101 in the treatment of severe bipolar depression with ASIB.

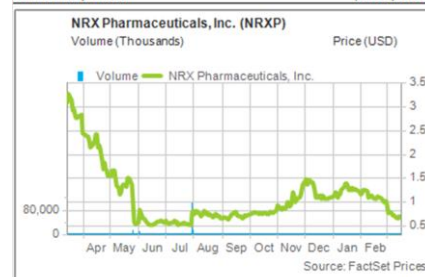
Valuation: We project our model out to 2033. We apply a 30% risk cut to our projected revenues in our product model in addition to our 30% risk rate applied in our Free Cash Flow to the Firm (FCFF), discounted EPS (dEPS), and Sum-of-the-Parts (SOP) models. We do assume additional capital raises. For conservatism we do not assume the company repurchases stock in its outyears. Upon a successful pivotal trial, we expect to revisit this assumption. The result is equal-weighted and averaged and rounded to the nearest whole number to derive our 12-month projected price target of \$3.0.

Risks to our thesis include: 1. Regulatory Approvals; 2. Clinical Science; 3. Intellectual Capital 4. Dilution



Source: NRx Pharmaceuticals

Stock Data			
52-Week Range	\$0.49	-	\$3.42
Shares Outstanding (mil.)	71.5		
Market Capitalization (mil.)	\$49		
Enterprise Value (mil.)	\$30		
Debt to Capital	0%		
Book Value/Share	\$7.69		
Price/Book	13.5		
Average Three Months Trading Volume (K)	182		
Insider Ownership	41.3%		
Institutional Ownership	4.7%		
Short interest (mil.)	1.7%		
Dividend / Yield	\$0.00/0.0%		



Company Description: (*adapted*): NRx Pharmaceuticals is a clinical-stage pharmaceutical company that applies innovative science to known molecules to develop lifesaving medicines through its wholly owned operating subsidiary, NeuroRx. NRx Pharmaceuticals' foundation project, NRX-101, is a fixed dose combination of D-Cycloserine, an NMDA antagonist, and lurasidone, a 5-HT_{2A} atypical antipsychotic and antidepressant, for the maintenance of remission from severe bipolar depression following initial stabilization with ketamine, and has been awarded Fast Track designation, Breakthrough Therapy designation, a Special Protocol Agreement, and a Biomarker Letter of Support by the US FDA. NRX-101 is covered by multiple U.S. and foreign patents, including a Composition of Matter patent. NRx Pharmaceuticals is also looking to use NRX-101 to help treat patients with PTSD suicidality, as the NMDA component of NRX-101 (D-Cycloserine) reduces Fear Memory, which is the driver of PTSD symptoms.

Exhibit 1. NMDA Landscape

	Clinical Target	NMDA Mechanism	Molecule	Phase	BTB	SPA	Composition of Matter	MADRS Difference	Suicidality Difference
AUVELITY®	MDD	Channel Blocker	Dextromethorphan / bupropion	Approved	X			3.9 pts	*
SPRAVATO®	MDD	Channel Blocker	esketamine	Approved	X			3.9 pts	*
NRX-101	Bipolar/PTSD Suicidality	Glycine Site Antagonist	Cycloserine / Lurasidone	3	X	X	X	7.7 pts	2.7 pts
REL-1017	MDD	Channel Blocker	esmethadone	3				NS	*
SLS-002	MDD	Channel Blocker	ketamine	3				pending	pending

Source: NRx Pharmaceuticals, Inc.

Exhibit 2. \$2.2B Market Opportunity Potential in Psychiatry

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



- There are no approved drugs for Suicidal Bipolar Depression
- Suicide kills ~50,000 Americans annually, disproportionately affecting people with Bipolar depression
 - 1/2 of people who suffer from bipolar depression attempt suicide
 - 1/5 people with BPD commit suicide

Source: NRx Pharmaceuticals, Inc.

Exhibit 3. No Approved Medicine for Suicidal Bipolar Depression

- Antidepressants (SSRIs) can increase suicidality.
- Patients with suicidality are routinely excluded from clinical trials of antidepressants
- Ketamine provides strong proof of concept but is known to be neurotoxic, addictive, hallucinogenic, and can only be administered in a clinic setting.
- NMDA receptor activity may play a greater role in bipolar depression than Major Depressive Disorder (MDD)

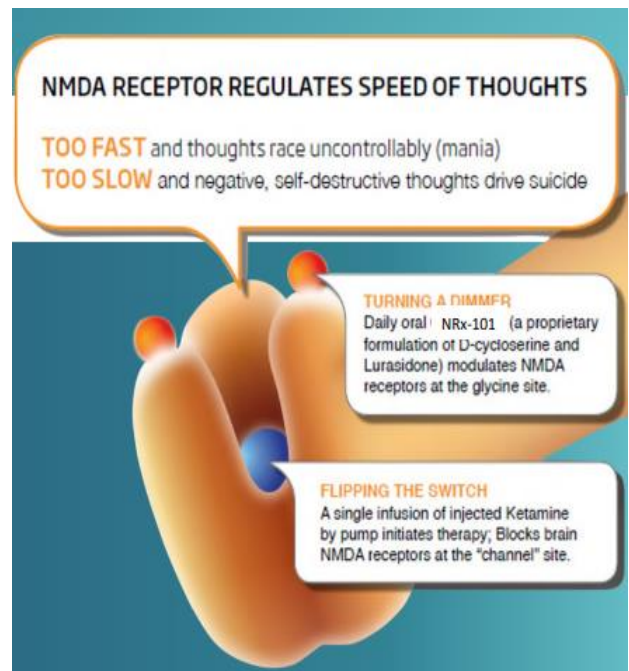


Clinical trials and nonclinical evidence demonstrate specific effect of **NMDA-inhibition** in blocking suicidal ideation and also depression in patients with bipolar disease.

Source: NRx Pharmaceuticals, Inc.

Exhibit 4. Understanding the NMDA Receptor – An ION Channel on the Surface of Brain Cells

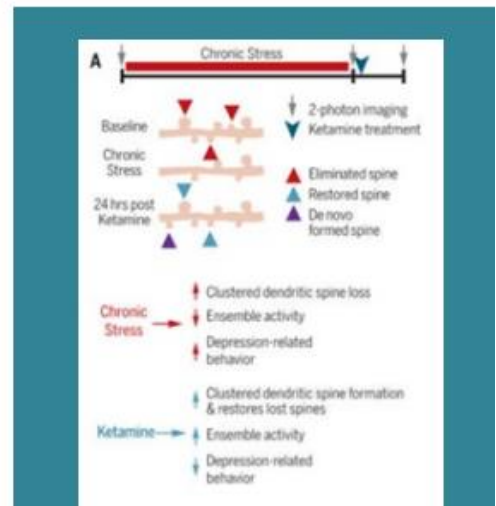
- At high levels of NMDA activity (wide open channel) thoughts are slowed substantially, patients ruminate on negative, frequently suicidal thoughts. Brain cells stop making new connections to neighboring cells
- NMDA antagonists decrease symptoms of depression
- NMDA antagonists block the akathisia caused by SSRI antidepressants in non-clinical studies
- NMDA antagonists “rewire” the brain by stimulating new connections between brain cells



Source: NRx Pharmaceuticals, Inc.

Exhibit 5. Clinical Results are Supported by Documented Changes in Brain Cell Interactions

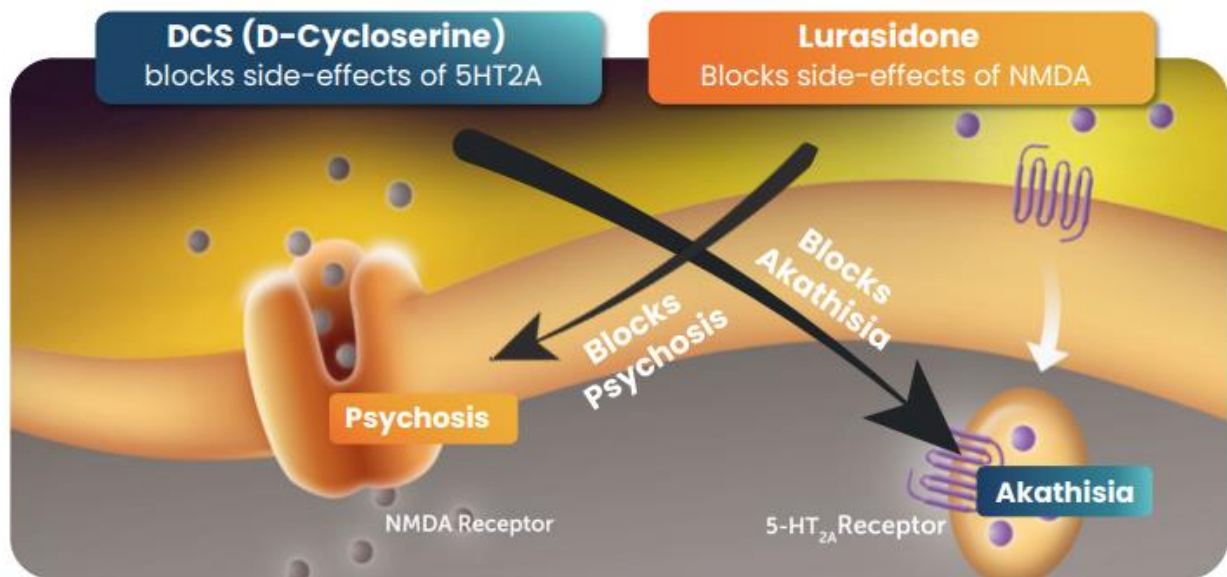
- High levels of NMDA activity are shown to damage the “dendrite spines” that connect brain cells to each other
- Loss of dendrite spines is associated with depression-related behavior
- NMDA blockade with ketamine is demonstrated to restore lost dendrite spines, while simultaneously reducing depression-related behavior



Source: NRx Pharmaceuticals, Inc.

Exhibit 6. The Patented NMDA Discovery: 90 Patents & Patent Applications Globally

Simultaneous Blockade of NMDA and 5-HT_{2A} Blocks NMDA Side Effects

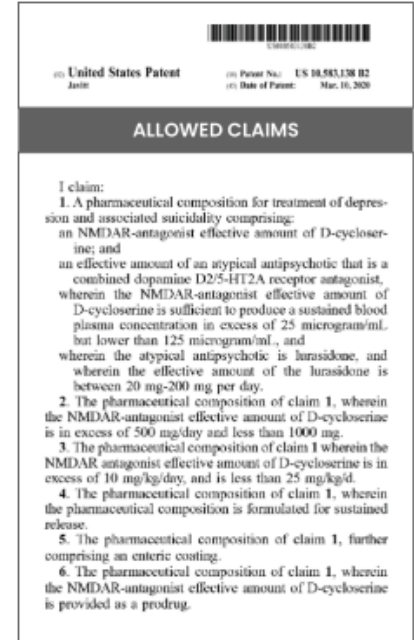


Source: NRx Pharmaceuticals, Inc.

Exhibit 7. Robust Composition of Matter Patent Protection

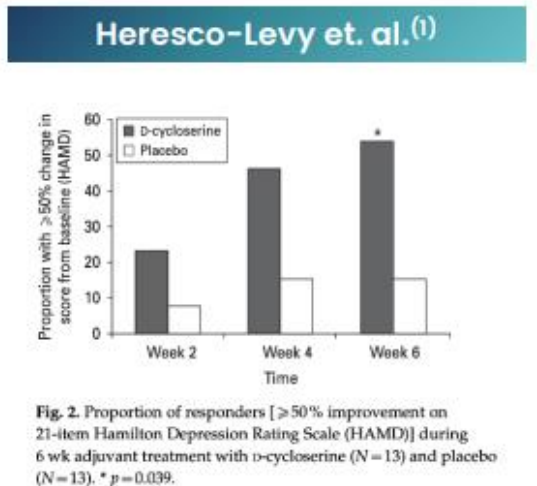
Patent Estate of 47 issued and 43 pending patents enables a platform of CNS drugs based on NMDA / 5HT_{2A} Synergy.

- Five patent families, 90+ filed applications, 47 issued patents in US/EU/CN/JP/KR/AU.
- Protects NRX-101 to at least 2033 with potential for protecting NMDA/5HT_{2A} class.
- Covers drugs for PTSD, Major Depressive Disorder, Obsessive Compulsive Disorder, and other targets.
- Combinations involving dextromethorphan, d-methadone, and S-ketamine are identified in the spec of US 10,583,138.

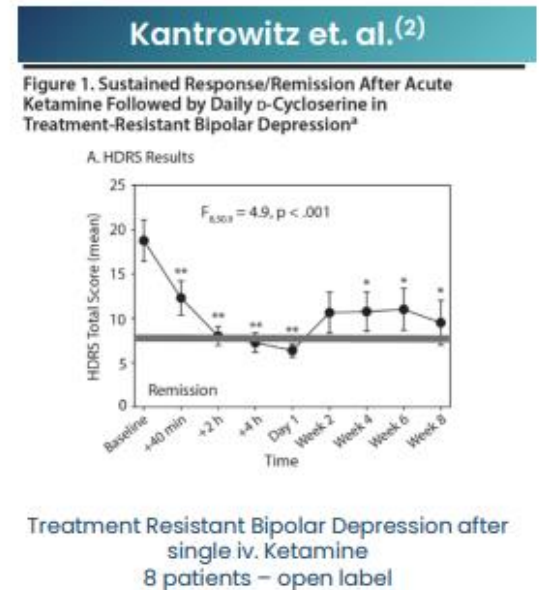


Source: NRx Pharmaceuticals, Inc.

Exhibit 8. Initial Clinical Evidence of Efficacy – Improved antidepressant and anti-suicidal effect

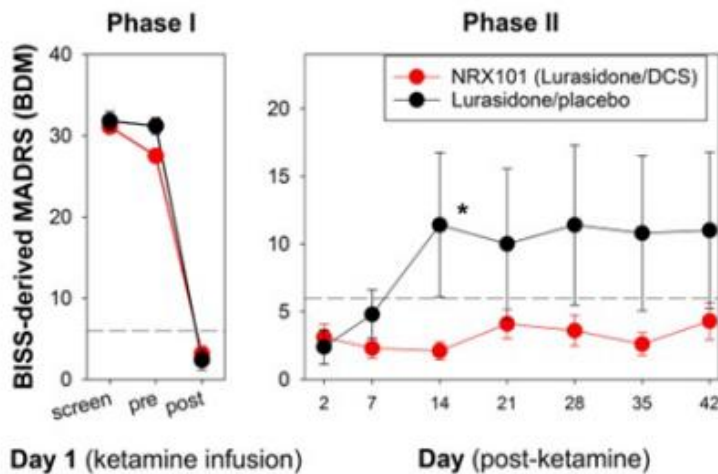


Treatment Resistant Depression
26 patients – randomized, placebo controlled



Source: NRx Pharmaceuticals, Inc.

Exhibit 9. STABIL-B Trial Showed Superiority of NRX-101 vs Lurasidone in reducing Depression



Patients enrolled with severe depression (MADRS>30) and acute suicidality (C-SSRS 4/5)

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

Mean 7.7 point benefit on MADRS (Primary Endpoint, $P=.03$) through day 42 vs. lurasidone.

Difference is similar to or larger than that seen with Esketamine and AXS-05*

40% relapse in control group, no relapse in NRX-101 group ($P=.07$)

Patients who would otherwise have been in the hospital for 1 week plus were discharged after 1-2 days

*J Clin Psychiatry 2022 May 30;83(4):21m14345

Source: NRx Pharmaceuticals, Inc.

Exhibit 10. STABIL-B Showed Significant Effect of D-Cycloserine in Reducing Suicidality

1.5 point advantage on Columbia Suicide Severity Rating Scale ($P=.02$)

2.9 point advantage on Clinical Global Impression Suicidality Scale ($P=.02$)

Trend ($P=.14$) towards decreased akathisia in the NRX-101 group on the BARS akathisia scale

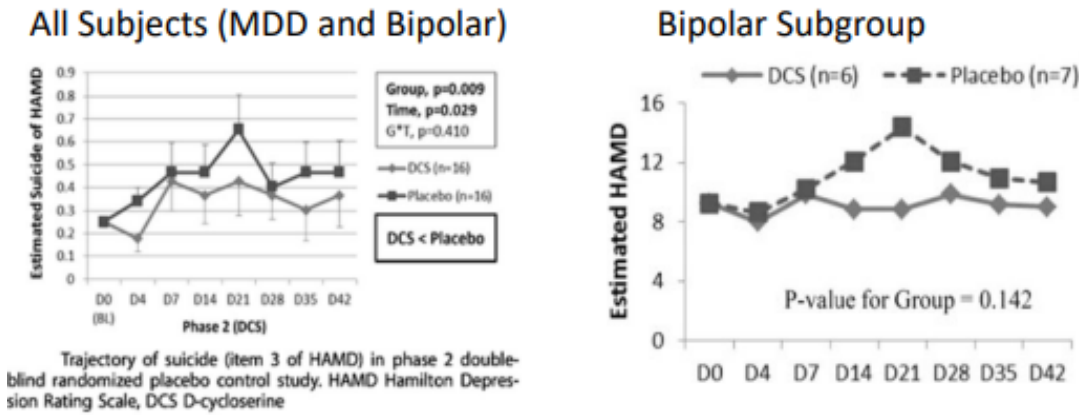
No SAEs in the NRX-101 treated group

3 SAEs with 2 hospitalizations in the lurasidone treated group

	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: NRx Pharmaceuticals, Inc.

Exhibit 11. STABIL-B Suicidality Findings are Congruent with those of the Bipolar Group



Treatment Resistant MDD + Bipolar Depression treated with D-cycloserine after two iv. Ketamine infusions
32 patients total – placebo controlled

Source: NRx Pharmaceuticals, Inc.

Exhibit 12. Clinical Results Supported by Documented Changes in Human Brain Chemistry

NMDA antagonists, by stimulating brain glutamate are now known from nonclinical studies to “rewire” the brain by stimulating new connections between brain cells in the frontal cortex

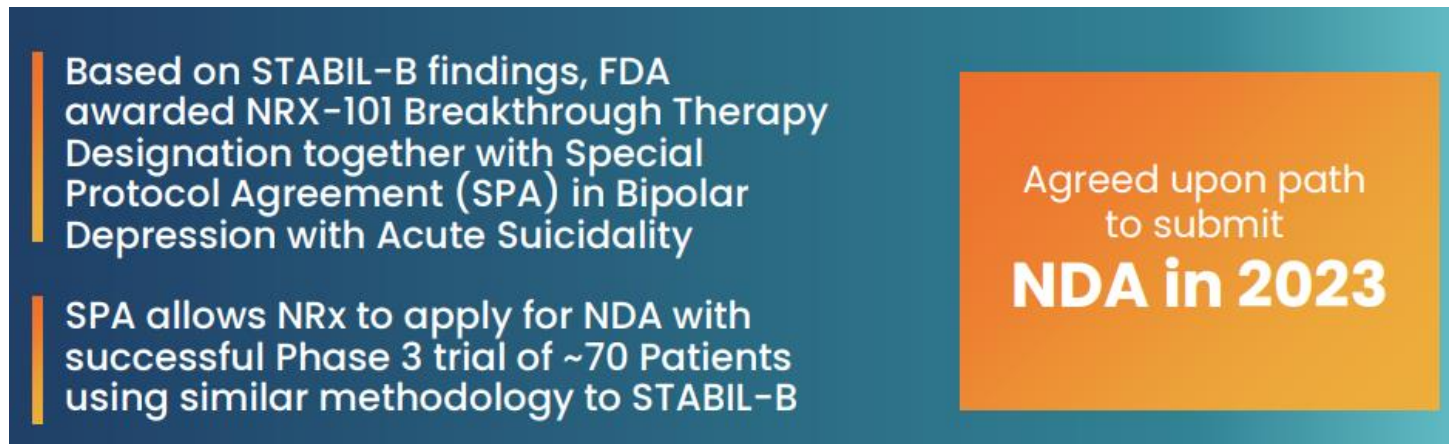
NRx is the only company in the psychiatry field to have received a “Biomarker Letter of Support” from the FDA for clinical demonstration of neurochemical changes that correlate to improvement on clinical depression scales. Published by Columbia University

1. Ketamine reverses neural changes underlying depression-related behaviors in mice | National Institutes of Health (NIH)
2. Letter of Support (LOS) Initiative | FDA
3. Dong Z. et. Al. Front. Psychiatry. 2021 Jun; 12 , art. no. 653026



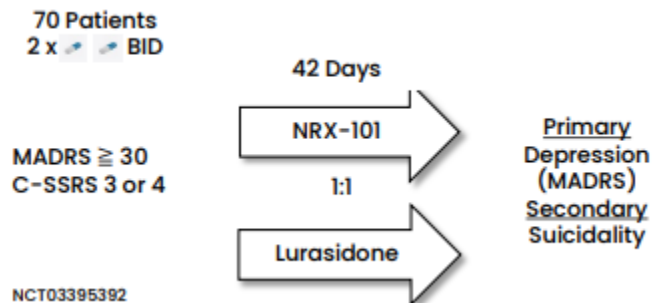
Source: NRx Pharmaceuticals, Inc.

Exhibit 13. FDA Approval Roadmap – Breakthrough Designation and SPA



Source: NRx Pharmaceuticals, Inc.

Exhibit 14. Potential Label Expansion Roadmap



Phase 2 Trial for Subacute Suicidality

- Targeting patients with severe bipolar depression (MADRS $>$ 30) who are cared for in outpatient setting, but at risk for hospitalization (C-SSRS \geq 4)
- Randomized to NRX-101 vs. Lurasidone (no ketamine pre-treatment)
- Enrollment underway at ~10 study sites in US
- Trial aims to enroll 70 patients

Source: NRx Pharmaceuticals, Inc.

Exhibit 15. Efficient Path to Launch by 2024

Indication	Compound	Pre clinical	Phase 1	Phase 2	Phase 3	Status
Bipolar Depression & Suicidal Ideation						
Severe Bipolar Depression with Acute Suicidal ideation	NRX-100™ / NRX-101™	FDA SPA, Breakthrough, Biomarker letter of Support				Data readout expected Q3 2023
Moderate Bipolar Depression with Sub-Acute suicidal ideation	NRX-101™	Currently Enrolling				Data readout expected 1Q 2023
Post-Traumatic Stress Disorder (PTSD)						
PTSD in patients with Depression & Suicidality	NRX-101™	Pending				P2 Trial initiation and data readout expected in 2023

- Technology and Manufacturing Transfer to USA completed in Q2 2022
- Phase 3 using expected Commercial Scale drug released in October 2022 with FDA Module 3 filing
- Potential for Commercial Sales of NRX-101 by 2024
- Options for either Direct Launch of license/partnering

Source: NRx Pharmaceuticals, Inc.

Exhibit 16. NRX-101 for PTSD – No Approved Medicines for PTSD Symptoms

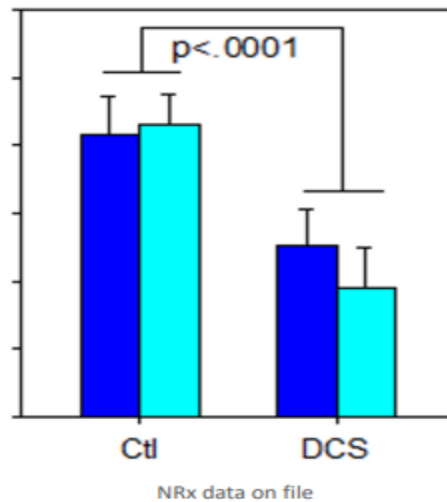


- Only two currently approved SSRI's for PTSD-related Depression – both of which carry black box suicide warnings and neither have an effect on Fear Memory

Source: NRx Pharmaceuticals, Inc.

Exhibit 17. NRX-101 Extinguished Fear Memory in validated WKY model of PTSD

DCS-induced Reduced Fear Memory in WKY Rodent model of PTSD



- Patents were issued based on non-clinical behavioral studies in models of PTSD using DCS as the NMDA Component
- PTSD symptoms are not the same as depression and no SSRI antidepressant has demonstrated benefit on validated clinical measures of PTSD
- PTSD is driven by unique symptoms of intrusion (“Fear Memory”) where the event repeatedly and uncontrollably invades one’s thoughts
- D-Cycloserine (DCS), the NMDA component of NRX-101, extinguished fear memory in the validated WKY model of PTSD

Source: NRx Pharmaceuticals, Inc.

Exhibit 18. Looking Forward



Source: NRx Pharmaceuticals, Inc.

Intellectual Property: NRx Pharmaceuticals has 47 issued patents and more than 43 pending patents owned by or licensed to NRx Pharmaceuticals, due to the discovery of synergy between the two drug classes in NRX-101 (D-Cycloserine & Lurasidone) in the treatment of CNS disorders, combined with the efficacy of D-Cycloserine in the treatment of depression and PTSD.

Valuation: Our valuation for NRx Pharmaceuticals is based on revenue projections out to 2033. We know the markets are quite large for depression, PTSD, and related disorders. Success in one area leads to other indications. For model purposes, we assume a focus on BPD and PTSD only. Given that this is a pivotal program with well-vetted science, we adjust for the associated risks of approval with a 30% risk cut in our therapeutic models. The subsequent revenues are then fed into our income statement. To the income statement metrics, we then model a target valuation. We assume the company does raise additional capital, and as such, our valuation math is based on 2033 fully diluted share count. We may revisit this assumption upon completion of a successful pivotal trial and commercialization; the company is likely in the out years to repurchase stock. For conservatism, we hold off on making this assumption for the moment. We assume rising SG&A and R&D as the company commercializes its products and expands its pipeline, coupled with an improving cost of goods sold (COGS) initially at 20% and at scale falling to just 10%. Our valuation models: Free Cash Flow to the Firm (FCFF), discounted EPS (dEPS), and Sum-of-the-Parts (SOP), use a 30% discount rate. This is in addition to the 30% risk cut in our revenue models. We select 30% for micro-capitalized growth companies, and this represents our highest risk rate. The result of these three models is then equal-weighted and averaged and rounded to the nearest whole number to provide a 12-month target price.

Exhibit 19. Free Cash Flow Model

Average	\$	3
Price Target	\$	2
Year		2023

DCF Valuation Using FCF (mln):

units ('000)	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
EBIT	(48,587)	(47,209)	(27,416)	(27,690)	7,033	184,753	331,471	489,185	735,897	906,606	1,013,640	1,147,878
Tax Rate	0%	0%	0%	0%	5%	8%	10%	18%	24%	28%	30%	31%
EBIT(1-t)	(48,587)	(47,209)	(27,416)	(27,690)	6,681	169,973	298,324	401,132	559,282	652,756	709,548	792,036
CapEx												
Depreciation												
Change in NWC												
FCF	(48,587)	(47,209)	(27,416)	(27,690)	6,681	169,973	298,324	401,132	559,282	652,756	709,548	792,036
PV of FCF	(63,163)	(47,209)	(21,089)	(16,385)	3,041	59,512	80,347	83,105	89,131	80,021	66,910	57,453
Discount Rate	30%											
Long Term Growth Rate	1%											
Terminal Cash Flow	2,758,469											
Terminal Value YE2033	200,094											
NPV	634,931											
NPV-Debt	-											
Shares out (thousands)	268,586	2033E										
NPV Per Share	\$	2.36										

Source: Dawson James estimates

Exhibit 20. Discounted EPS Model

Current Year	2023
Year of EPS	2033
Earnings Multiple	15
Discount Factor	30%
Selected Year EPS	\$ 3.61
NPV	\$ 3.93

Source: Dawson James estimates

Discount Rate and Earnings Multiple Varies, Year is Constant							
Earnings Multiple	2033 EPS						
	3.9	5%	10%	15%	20%	25%	30%
5		\$11.08	\$6.96	\$4.46	\$2.91	\$1.94	\$ 1.31
10		\$22.15	\$13.91	\$8.92	\$5.83	\$3.87	\$ 2.62
15		\$33.23	\$20.87	\$13.38	\$8.74	\$5.81	\$ 3.93
20		\$44.31	\$27.83	\$17.84	\$11.66	\$7.75	\$ 5.24
25		\$55.39	\$34.78	\$22.30	\$14.57	\$9.69	\$ 6.54
30		\$66.46	\$41.74	\$26.76	\$17.49	\$11.62	\$ 7.85
35		\$77.54	\$48.70	\$31.22	\$20.40	\$13.56	\$ 9.16
40		\$88.62	\$55.65	\$35.68	\$23.31	\$15.50	\$ 10.47

Exhibit 21. Sum-of-the-Parts Model

NRx Pharmaceuticals	LT Gr	Discount Rate	Yrs. to Mkt Peak	% Success	Peak Sales MM's	Term Val
NRX-101 for BPD	1%	30%	5	70%	\$800	\$2,759
NPV						\$1.55
NRX-101 for PTSD	1%	30%	5	70%	\$800	\$2,759
NPV						\$1.55
NPV						
						80%
MM Shrs OS (2030E)						269
Total						\$3.10

Source: Dawson James estimates

Risks to our thesis include 1. Regulatory Approvals; 2. Clinical Science; 3. Intellectual Capital 4. Dilution

- **Regulatory Approvals.** The company's products require regulatory approvals, and there can be no assurances that the requirements to achieve these approvals can be met. Furthermore, even if a drug product is approved, the regulators may impose limitations on the use or marketing of such product.
- **Clinical Science:** The company will need to demonstrate to its "sophisticated" clients (doctors and other physicians) that the product is effective, reliable, accessible, and marketable.
- **The Competitive Landscape & IP.** The company does have intellectual properties and knows how to protect the utility of its drugs; however, our patent position is highly uncertain.
- **Dilution:** The company is likely to incur losses for the foreseeable future until it is able to generate sufficient revenue from product sales. Our model assumes a rising share count. There can be no assurances that the company can successfully raise the capital required to execute its business strategy.

Exhibit 22. Income Statement

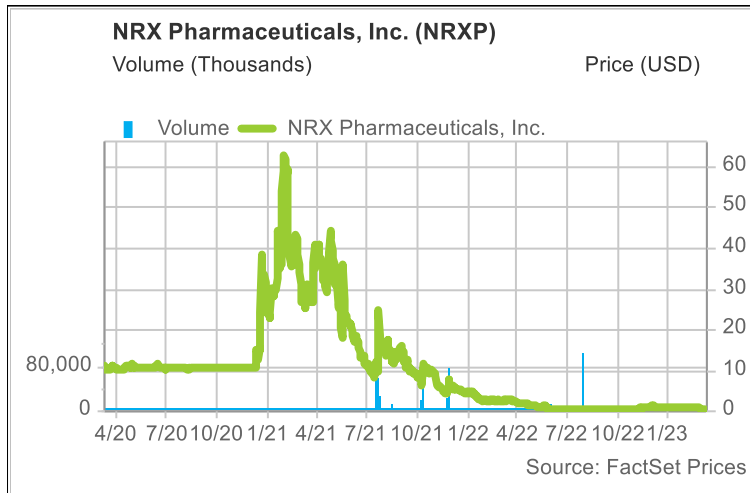
NRx Pharmaceuticals: Income Statement																
000 - YE December 31	2022E	1Q23E	2Q23E	3Q23E	4Q23E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Product sales	-	-	-	-	-	-	-	-	50,000	200,000	300,000	400,000	600,000	660,000	726,000	798,600
NRX-101 for BPD	-	-	-	-	-	-	-	-	-	100,000	200,000	300,000	420,000	588,000	646,800	711,480
NRX-101 for PTSD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Product Sales	-	-	-	-	-	-	-	-	50,000	300,000	500,000	700,000	1,020,000	1,248,000	1,372,800	1,510,080
Expenses																
COGS	-	-	-	-	-	-	-	-	15,000	87,000	140,000	182,000	255,000	312,000	329,472	332,218
COGS %	0%	0%	0%	0%	0%	0%	0%	0%	30%	29%	28%	26%	25%	25%	24%	22%
Research and Development	16,720	4,815	5,016	5,016	5,217	20,064	24,077	28,892	23,114	18,491	18,676	20,543	24,652	29,583	29,878	30,177
General and Administrative	26,876	6,515	6,786	6,786	7,058	27,145	27,416	27,690	27,967	28,247	28,529	28,815	29,103	29,394	29,688	29,985
Settlement Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reimbursement of expenses from Relief Therapeutics	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Expenses	43,596	11,330	11,802	11,802	12,274	47,209	27,416	27,690	42,967	115,247	168,529	210,815	284,103	341,394	359,160	362,202
Loss from Operations	(43,596)	(11,330)	(11,802)	(11,802)	(12,274)	(47,209)	(27,416)	(27,690)	7,033	184,753	331,471	489,185	735,897	906,606	1,013,640	1,147,878
Other (income) Expenses																
Gain on extinguishment of debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest income	(213)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest expense	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change in fair value of warrant liability	(199)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change in fair value of Earnout Cash liability	(4,582)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total other (income) expense	(4,991)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Loss	(48,587)	(11,330)	(11,802)	(11,802)	(12,274)	(47,209)	(27,416)	(27,690)	7,033	184,753	331,471	489,185	735,897	906,606	1,013,640	1,147,878
	-	-	-	-	-	-	-	-	352	14,780	33,147	88,053	176,615	253,850	304,092	355,842
Tax Rate	0%	0%	0%	0%	0%	0%	0%	0%	5%	8%	10%	18%	24%	28%	30%	31%
GAAP Net Income (loss)	(48,587)	(11,330)	(11,802)	(11,802)	(12,274)	(47,209)	(27,416)	(27,690)	6,681	169,973	298,324	401,132	559,282	652,756	709,548	792,036
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GAAP-EPS	(0.74)	(0.15)	(0.13)	(0.11)	(0.09)	(0.48)	(0.18)	(0.14)	0.03	0.79	1.39	1.86	2.58	3.00	3.25	3.61
GAAP EPS (dil)	(0.74)	(0.14)	(0.11)	(0.10)	(0.08)	(0.41)	(0.16)	(0.12)	0.03	0.65	1.13	1.52	2.11	3.00	3.25	3.61
Wgtd Avg Shrs (Bas) '000	65,591	77,181	92,953	108,883	129,971	102,247	149,616	193,745	213,409	214,264	215,123	215,985	216,850	217,718	218,591	219,466
Wgtd Avg Shrs (Dil) '000	65,591	82,181	103,003	124,033	150,273	114,873	175,468	233,310	261,174	262,220	263,271	264,325	265,384	266,447	267,515	268,586

Source: Dawson James estimates, company reports

Companies mentioned in this report:

Important Disclosures:

Price Chart:



Price target and ratings changes over the past three years:

Initiated – Buy – March 17, 2023 – Price Target \$3.0

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Ratings Definitions:

- 1) **Buy:** The analyst believes the price of the stock will appreciate and produce a total return of at least 20% over the next 12-18 months.
- 2) **Neutral:** The analyst believes the price of the stock is fairly valued for the next 12-18 months.
- 3) **Sell:** The analyst believes the price of the stock will decline by at least 20% over the next 12-18 months and should be sold.

The following chart reflects the range of current research report ratings for all companies, followed by the analysts of the Firm. The chart also reflects the research report ratings relating to those companies for which the Firm has performed investment banking services.

Current as of 17-Mar-23

	Company Coverage		Investment Banking	
Ratings Distribution	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	25	69%	1	3%
Market Perform (Neutral)	11	31%	2	6%
Market Underperform (Sell)	0	0%	0	0%
Total	36	100%	3	9%

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