

NRx Pharmaceuticals, Inc. (NRXP) – Buy

May 17, 2023

Reports the Quarter - Funded to Key Catalyst

Jason H. Kolbert
Managing Director & Senior
Analyst
jkolbert@dawsonjames.com

NRX Pharma reported first quarter 2023 results. The company spent \$9.4M (operations) and closed the period with \$16.5M in cash and equivalents. Enrollment continues in the Phase 2b/3 clinical trial evaluating NRX-101 in Suicidal Treatment-Resistant Bipolar Depression with data expected in 4Q23.

Investment Highlights

Clinical Update: The company initiated a Phase 3 registrational clinical trial for NRX-101 in patients suffering from severe bipolar depression with acute suicidality. In Q123 the Company met with the FDA and was advised to expand its intended use of NRX-101 from the original population of patients with acute suicidality who might be treated in the hospital environment to the broader population of patients with subacute suicidal ideation (now described by the Company as Treatment-Resistant Bipolar Depression) who are treated in the outpatient setting. These patients are the current target population of the ongoing clinical trial.

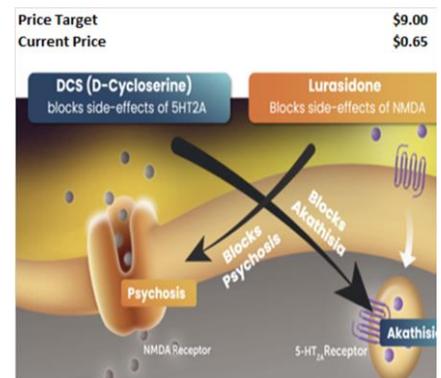
DSMB: In Q1 2023 the study's independent Data Safety Monitoring Board (DSMB) reviewed both safety and unblinded efficacy data for the first 50 patients in the clinical trial and advised the Company that no safety concerns were identified. Moreover, the DSMB did not identify a futility signal, suggesting that the trial has potential to demonstrate a statistically significant outcome with additional enrollment. On this basis, the DSMB advised management to continue enrolling study participants.

FDA Guidance: The Company's upgraded the ongoing clinical trial to a phase 2b/3 trial, the results of which have the potential to be used for registrational filings.

Trail Enrollment: In April 2023, the Company contracted with InHealth to initiate a recruitment campaign that may cover up to 45 states in the US to recruit sufficient participants for this enlarged trial. The Company has similarly broadened its previously disclosed relationship with Science 37, a contract research organization that conducts decentralized clinical trials, to enroll participants identified by the InHealth recruitment initiative and randomize them to be treated within the broadened clinical trial.

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. We also assume the company repurchases stock in its outyears, (or we may even see a license deal that brings in non-dilutive capital and reduces our assumed development expenses. The result is equal-weighted and averaged and rounded to the nearest whole number to derive our 12-month projected price target of \$9.0.

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



Price Target	\$9.00
Current Price	\$0.65
Stock Data	
52-Week Range	\$0.49 - \$1.68
Shares Outstanding (mil.)	70.3
Market Capitalization (mil.)	\$45
Enterprise Value (mil.)	\$29
Debt to Capital	0%
Book Value/Share	\$7.69
Price/Book	10.0
Average Three Months Trading Volume (K)	98
Insider Ownership	39.2%
Institutional Ownership	4.5%
Short interest (mil.)	2.2%
Dividend / Yield	\$0.00/0.0%



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. Our model assumes the company does raise additional capital. However, we also assume that with success, the company can repurchase stock (in the out-years) and create an efficient capital structure, and we may see an early license deal that brings in non-dilutive capital and or reduces expenses. This change is what principally drives our valuation target from \$3.0 (which was based on a fully diluted share count in 2033) to \$9.0. In our model, we assume a 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. 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 1. Free Cash Flow Model

Average	\$	9
Price Target	\$	7
Year		2023

DCF Valuation Using FCF (mil):

Units ('000)	2022E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
EBIT	(39,816)	(48,076)	(27,920)	(28,199)	9,519	211,234	380,946	565,656	837,362	1,030,866	1,150,374	1,328,536
Tax Rate	0%	0%	0%	0%	5%	8%	10%	18%	24%	28%	30%	31%
EBIT(1-t)	(39,816)	(48,076)	(27,920)	(28,199)	9,043	194,335	342,852	463,838	636,395	742,223	805,262	916,690
CapEx												
Depreciation												
Change in NWC												
FCF	(39,816)	(48,076)	(27,920)	(28,199)	9,043	194,335	342,852	463,838	636,395	742,223	805,262	916,690
PV of FCF	(51,761)	(48,076)	(21,477)	(16,686)	4,116	68,042	92,340	96,096	101,420	90,989	75,936	66,495
Discount Rate	30%											
Long Term Growth Rate	1%											
Terminal Cash Flow	3,192,610											
Terminal Value YE2033	231,586											
NPV	740,781											
NPV-Debt	-											
Shares out (thousands)	100,150											2033E
NPV Per Share	\$ 7.40											

Source: Dawson James estimates

Exhibit 2. Discounted EPS Model

Current Year	2023
Year of EPS	2033
Earnings Multiple	15
Discount Factor	30%
Selected Year EPS	\$ 9.15
NPV	\$ 9.96

Source: Dawson James estimates

		Discount Rate and Earnings Multiple Varies, Year is Constant					
		2033 EPS					
Earnings Multiple	10.0	5%	10%	15%	20%	25%	30%
	5		\$28.10	\$17.64	\$11.31	\$7.39	\$4.91
10		\$56.19	\$35.29	\$22.62	\$14.78	\$9.83	\$ 6.64
15		\$84.29	\$52.93	\$33.94	\$22.17	\$14.74	\$ 9.96
20		\$112.38	\$70.58	\$45.25	\$29.56	\$19.66	\$ 13.28
25		\$140.48	\$88.22	\$56.56	\$36.96	\$24.57	\$ 16.60
30		\$168.57	\$105.87	\$67.87	\$44.35	\$29.48	\$ 19.92
35		\$196.67	\$123.51	\$79.19	\$51.74	\$34.40	\$ 23.24
40		\$224.76	\$141.15	\$90.50	\$59.13	\$39.31	\$ 26.56

Exhibit 3. 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	80%	\$800	\$2,759
NPV						\$4.75
NRX-101 for PTSD	1%	30%	5	80%	\$800	\$2,759
NPV						\$4.75
NPV						
						80%
MM Shrs OS (2030E)						100
Total						\$9.50

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 4. Income Statement

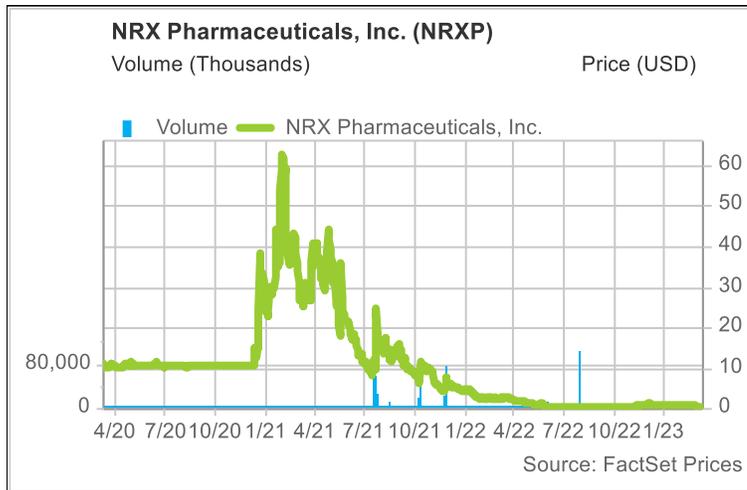
NRx Pharmaceuticals: Income Statement																
000 : YE December 31	2022A	1Q23A	2Q23E	3Q23E	4Q23E	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Product sales	-	-	-	-	-	-	-	-	50,000	200,000	300,000	400,000	600,000	660,000	726,000	798,600
NRX-101 for BPD	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NRX-101 for PTSD	-	-	-	-	-	-	-	-	100,000	200,000	300,000	420,000	588,000	646,800	711,480	
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	-	-	-	-	-	-	-	-	12,000	60,000	90,000	105,000	153,000	187,200	192,192	151,008
COGS %	0%	0%	0%	0%	0%	0%	0%	0%	24%	20%	18%	15%	15%	15%	14%	10%
Research and Development	17,027	3,650	5,108	5,108	6,566	20,432	24,519	29,423	23,538	18,830	19,019	20,921	25,105	30,126	30,427	30,731
General and Administrative	27,370	5,785	6,911	6,911	8,037	27,644	27,920	28,199	28,481	28,766	29,054	29,344	29,638	29,934	30,234	30,536
Settlement Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reimbursement of expenses from Relief Therapeutics	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Operating Expenses	44,397	9,435	12,019	12,019	14,603	48,076	27,920	28,199	40,481	88,766	119,054	134,344	182,638	217,134	222,426	181,544
Loss from Operations	(44,397)	(9,435)	(12,019)	(12,019)	(14,603)	(48,076)	(27,920)	(28,199)	9,519	211,234	380,946	565,656	837,362	1,030,866	1,150,374	1,328,536
Other (income) Expenses																
Gain on extinguishment of debt	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest income	(249)	(156)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Interest expense - Convertible note	505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change in fair value of warrant liability	(255)	1,772	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Change in fair value of Earnout Cash liability	(4,582)	(12)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total other (income) expense	(4,581)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Loss	(39,816)	(11,039)	(12,019)	(12,019)	(14,603)	(48,076)	(27,920)	(28,199)	9,519	211,234	380,946	565,656	837,362	1,030,866	1,150,374	1,328,536
Tax Rate	0%	0%	0%	0%	0%	0%	0%	0%	5%	8%	10%	18%	24%	28%	30%	31%
GAAP Net Income (loss)	(39,816)	(10,933)	(12,019)	(12,019)	(14,603)	(47,970)	(27,920)	(28,199)	9,043	194,335	342,852	463,838	636,395	742,223	805,262	916,690
GAAP-EPS	(0.61)	(0.16)	(0.13)	(0.11)	(0.11)	(0.51)	(0.19)	(0.15)	0.04	0.90	1.59	2.14	2.92	3.40	3.67	9.15
GAAP EPS (dil)	(0.61)	(0.13)	(0.12)	(0.10)	(0.10)	(0.41)	(0.16)	(0.12)	0.03	0.74	1.30	1.75	2.39	3.40	3.67	9.15
Wgtd Avg Shrs (Bas) '000	65,767	67,454	93,676	109,613	130,709	100,363	150,372	194,532	214,210	215,068	215,930	216,795	217,663	218,535	219,411	100,150
Wgtd Avg Shrs (Dil) '000	65,767	82,897	103,726	124,763	151,011	115,599	176,225	234,097	261,975	263,024	264,078	265,136	266,198	267,264	268,335	100,150

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
 Update Report – March 27, 2023 – Price Target \$3.0
 Update Report – March 31, 2023 – Price Target \$3.0
 Price Target Change- April 3, 2023 Price Target goes from \$3.0 to \$9.0
 Update Report – April 5, 2023 – Price Target \$9.0
 Update Report – May 17, 2023 – Price Target \$9.0

Dawson James Securities, Inc. (the "Firm") is a member of the Financial Industry Regulatory Authority ("FINRA") and the Securities Investor Protection Corporation ("SIPC").

The Firm does not make a market in the securities of the subject company(s). The Firm has not engaged in investment banking relationships with the subject company in the prior twelve months, as a manager or co-manager of a public offering and has not received compensation resulting from those relationships. The Firm may seek compensation for investment banking services in the future from the subject company(s). The Firm has not received other compensation from the subject company(s) in the last 12 months for services unrelated to managing or co-managing of a public offering.

Neither the research analyst(s) whose name appears on this report nor any member of his (their) household is an officer, director, or advisory board member of these companies. The Firm and/or its directors and employees may own securities of the company(s) in this report and may increase or decrease holdings in the future. As of April 17, 2023, the Firm as a whole did not beneficially own 1% or more of any class of common equity securities of the subject company(s) of this report. The Firm, its officers, directors, analysts, or employees may affect transactions in and have long or short positions in the securities (or options or warrants related to those securities) of the company(s) subject to this report. The Firm may affect transactions as principal or agent in those securities.

Analysts receive no direct compensation in connection with the Firm's investment banking business. All Firm employees, including the analyst(s) responsible for preparing this report, may be eligible to receive non-product or service-specific monetary bonus compensation that is based upon various factors, including total revenues of the Firm and its affiliates as well as a portion of the proceeds from a broad pool of investment vehicles consisting of components of the compensation generated by investment banking activities, including but not limited to shares of stock and/or warrants, which may or may not include the securities referenced in this report.

Although the statements in this report have been obtained from and are based upon recognized statistical services, issuer reports or communications, or other sources that the Firm believes to be reliable, we cannot guarantee their accuracy. All opinions and estimates included in this report constitute the analyst's judgment as of the date of this report and are subject to change without notice.

Information about valuation methods and risks can be found in the "Valuation" and "Risk Analysis" sections of this report.

The securities of the company discussed in this report may be unsuitable for investors depending on their specific investment objectives and financial position. This report is offered for informational purposes only and does not constitute an offer or solicitation to buy or sell any securities discussed herein in any jurisdiction where such would be prohibited. Additional information is available upon request.

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 1-May-23

	Company Coverage		Investment Banking	
Ratings Distribution	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	26	72%	2	6%
Market Perform (Neutral)	10	28%	1	3%
Market Underperform (Sell)	0	0%	0	0%
Total	36	100%	3	9%

Analyst Certification:

The analyst(s) whose name appears on this research report certifies that 1) all of the views expressed in this report accurately reflect his (their) personal views about any and all of the subject securities or issuers discussed; and 2) no part of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst in this research report; and 3) all Dawson James employees, including the analyst(s) responsible for preparing this research report, may be eligible to receive non-product or service-specific monetary bonus compensation that is based upon various factors, including total revenues of Dawson James and its affiliates as well as a portion of the proceeds from a broad pool of investment vehicles consisting of components of the compensation generated by investment banking activities, including but not limited to shares of stock and/or warrants, which may or may not include the securities referenced in this report.