Minerva Neurosciences, Inc. (NERV)

Executing on Development Programs

MARKET OUTPERFORM | Price: $5.15 | Target Price: $11.00

MARKET DATA

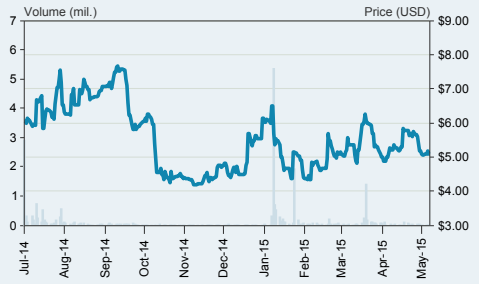
Price	$5.15
52-Week Range:	$4.08 - $10.00
Shares Out. (M):	24.7
Market Cap ($M):	$127.2
Average Daily Vol. (000):	8.0
Cash (M):	$52
Cash/Share:	$2.10
Enterprise Value (M):	$74
LT Debt (M):	$0

Source: Thomson Reuters and JMP Securities LLC

FY DEC		2014A	2015E	2016E
Revenue ($M)	1Q	$0.0	$0.0A	--
	2Q	$0.0	$0.0	--
	3Q	$0.0	$0.0	--
	4Q	$0.0	$0.0	--
	FY	**$0.0**	**$0.0**	**$0.0**
EPS	1Q	($0.34)	($0.31)A	--
	2Q	($2.55)	($0.29)	--
	3Q	($1.53)	($0.33)	--
	4Q	($0.40)	($0.38)	--
	FY	**($4.81)**	**($1.32)**	**($1.08)**
Previous FY		NC	($1.37)	($1.16)

Source: Company reports and JMP Securities LLC

STOCK PRICE PERFORMANCE



INVESTMENT HIGHLIGHTS

Clinical programs moving forward as planned, supported by a strengthened balance sheet; we reiterate our Market Outperform rating and $11 price target on Minerva Neurosciences. Minerva reported 1Q15 earnings results roughly in line with our and consensus estimates. The company ended 1Q with ~$52M in cash, which management indicates is sufficient to fund operations through 2016. The company continues to progress with its lead candidate, MIN-101 for the treatment of schizophrenia, with the initiation of the Phase 2b trial. Additionally, Minerva continues on track for the development of MIN-202 for insomnia, MIN-117 for depression, and MIN-301 for Parkinson's. Our $11 price target is derived through a sum-of-the-parts NPV analysis of MIN-101 and MIN-202, with earlier-stage programs MIN-117 and MIN-301 representing upside potential to our valuation.

MIN-101 Phase 2b trial has begun enrolling patients. Minerva has gained regulatory and ethics approvals in Europe and initiated the 234-patient Phase 2b schizophrenia trial. Enrollment is expected to continue through the end of 2015, with top-line results still anticipated in 2Q16. Recall that MIN-101 has previously demonstrated the potential for differentiated benefits on negative symptoms vs. currently available anti-psychotic drugs.

MIN-202 and MIN-301 are on track, and MIN-117's anticipated Phase 2a trial adds a higher-dose study arm. Together with partner Janssen Pharmaceuticals, Minerva continues to expect initiating a MIN-202 Phase 2a trial in primary insomnia and a Phase 1b trial in major depressive disorder with comorbid insomnia in mid-2015. In addition, MIN-301 continues to be on track for IND filing in 2016 for Parkinson's disease. Minerva is on track to initiate a Phase 2a trial for MIN-117 in major depression disorder in 2Q. Furthermore, management announced addition of a study arm with a higher dosing level (2.5mg) of MIN-117, as suggested by prior preclinical and clinical pharmacology studies (in healthy volunteers).

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1Q15 FINANCIAL SUMMARY

Minerva reported a relatively in-line quarter with a 1Q15 EPS loss of ($0.31), vs. JMP ($0.30) and above consensus ($0.52). Total operating expenses were slightly lower at $5.9MM, vs. our estimate of $6.5MM, with higher R&D spending ($4.0MM vs. $3.6MM JMP) and lower SG&A spending ($1.9MM vs. $2.9MM JMP).

We have updated our model to reflect 1Q15 financial results as summarized in Figure 1.

FIGURE 1. 1Q15 Financial Summary

NERV	1Q15			2015 est			2016 est		
	JMP est	Cons	Actual	JMP old	Cons	JMP new	JMP old	Cons	JMP new
Revenue	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**8.3**	**0.0**
R&D	3.6		4.0	23.5		23.8	24.7		25.0
SG&A	2.9		1.9	11.8		8.6	13.0		9.4
Total operating expense	6.5		5.9	35.3		32.4	37.7		34.4
Net income (loss)	**(6.5)**	**(10.0)**	**(6.1)**	**(35.3)**	**(39.3)**	**(33.1)**	**(37.7)**	**(46.7)**	**(35.1)**
Shares outstanding (diluted)	21.6		19.4	25.6		25.0	32.6		32.6
EPS (diluted)	**($0.30)**	**($0.52)**	**($0.31)**	**($1.37)**	**($1.89)**	**($1.32)**	**($1.16)**	**($1.66)**	**($1.08)**

Source: Company Reports and JMP Securities LLC

Company Description

Minerva Neurosciences is a clinical-stage biopharmaceutical company, headquartered in Cambridge, MA, focused on the development and commercialization of novel drug candidates to treat patients suffering from CNS diseases. The company has four novel clinical stage candidates with validated mechanisms of action, each having the potential to differentiate in important unmet medical needs. Its lead product candidates are MIN-101, for the treatment of schizophrenia, and MIN-202, which Minerva is co-developing with Jansen Pharma for the treatment of patients suffering from primary and secondary insomnia. In addition, the portfolio includes MIN-117, for the treatment of patients suffering from major depressive disorder, or MDD, and MIN-301, for the treatment of patients suffering from Parkinson's disease. Based on its current capital, the company intends to focus resources on the development of MIN-101 and MIN-202; however, development of pipeline candidates could be accelerated should additional funds, including from non-dilutive sources or partnerships, become available.

Investment Risks

Potential risks to our price target include, but are not limited to, clinical, regulatory, commercial and competitive factors.

Clinical risk. Minerva may not be successful in the full development and launch of its product candidates. There may be enrollment, dosing, efficacy, or safety issues that would preclude development. It is possible that drug candidates may fail to reach endpoints or statistical significance in respective clinical trials. Any of the aforementioned issues would cause a delay, or potential discontinuation of development. If product candidates make it through clinical trials, the company may encounter manufacturing issues including challenges with the scale-up to commercial quantities. All of the above circumstances should be taken into consideration when assessing clinical risk.

Regulatory risk. The company’s drug candidates may not receive approval from the FDA or from ex-U.S. agencies. The FDA may request additional pre-clinical or clinical trials to provide validation for approval that would likely delay approval timelines and increase expenses. If approval is granted, the regulatory agency may impose restrictions on the label, or may require a REMS program for a drug candidate; this could limit commercial uptake and delay commercial progress.

Market risk. The market opportunity for products may not accurately reflect current estimates and there may be challenges with market adoption. This would impact the ability to reach revenue and profitability projections. The company must obtain and protect its intellectual property rights in order to effectively compete in the marketplace. Minerva could get involved in patent lawsuits that would likely be time-consuming and expensive.

Financial risk. Minerva has no commercial products generating revenue, thus, it has not been, and is not yet, profitable. It has incurred losses each year since inception due to research and development expenses. These expenses are expected to increase in the near future as product candidates advance through the pipeline. The company will likely need to raise additional capital to fund these trials and continue operations. If there are any issues with acquiring needed financing, commercializing its product candidates, or achieving sales revenue, the company may not reach profitability.

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JMP Securities was manager or co-manager of a public offering of securities for Minerva Neurosciences, Inc. (NERV) in the past 12 months, and received compensation for doing so.

JMP Securities expects to receive OR intends to seek compensation for investment banking services from Minerva Neurosciences, Inc. in the next 3 months.

JMP Securities Investment Opinion Definitions:

Market Outperform (MO): JMP Securities expects the stock price to outperform relevant market indices over the next 12 months.
Market Perform (MP): JMP Securities expects the stock price to perform in line with relevant market indices over the next 12 months.
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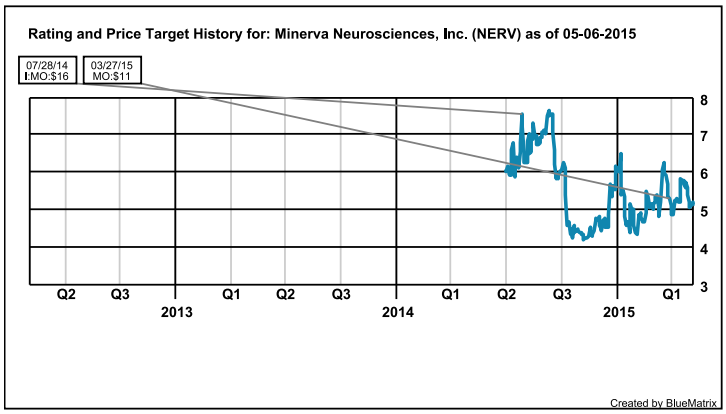
JMP Securities Research Ratings and Investment Banking Services: (as of May 7, 2015)

JMP Rating	Regulatory Equivalent	# Co's Under Coverage	*% of Total*	Regulatory Equivalent	# Co's Under Coverage	*% of Total*	# Co's Receiving IB Services in Past 12 Months	*% of Co's With This Rating*
MARKET OUTPERFORM	Buy	280	*62.08%*	Buy	280	*62.08%*	94	*33.57%*
MARKET PERFORM	Hold	140	*31.04%*	Hold	140	*31.04%*	18	*12.86%*
MARKET UNDERPERFORM	Sell	9	*2.00%*	Sell	9	*2.00%*	0	*0%*
COVERAGE IN TRANSITION		21	*4.66%*		21	*4.66%*	4	*19.05%*
TOTAL:		451	*100%*		451	*100%*	116	*25.72%*

Stock Price Chart of Rating and Target Price Changes:

Note: First annotation denotes initiation of coverage or 3 years, whichever is shorter. If no target price is listed, then the target price is N/A. In accordance with NASD Rule 2711, the chart(s) below reflect(s) price range and any changes to the rating or price target as of the end of the most recent calendar quarter. The action reflected in this note is not annotated in the stock price chart. Source: JMP Securities.



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