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**Initiating Coverage** 

#### November 7, 2016

#### **Key Metrics**

CUR - NASDAQ	\$0.23
Pricing Date	Nov 4 2016
Price Target	\$2.25
52-Week Range	\$1.26 - \$0.19
Shares Outstanding (mm)	114.8
Market Capitalization (mm)	\$26.4
3-Mo Average Daily Volume	829,562
Institutional Ownership	20%
Debt/Total Capital	NM
ROE	NM
Book Value/Share	\$0.01
Price/Book	23.0x
Dividend Yield	NM
LTM EBITDA Margin	NM

#### **EPS FY: December**

		Prior	Curr.	Prior	Curr.
	2015A	2016E	2016E	2017E	2017E
1Q-Mar	(0.06)		(0.07)A		
2Q-Jun	(0.06)		(0.04)A		
3Q-Sep	(0.06)		(0.04)E		
4Q-Dec	(0.06)		(0.04)E		
FY	(0.24)		(0.18)E		(0.17)E
P/E	NM		NM		NM

#### REVENUE

		Prior	Curr.	Prior	Curr.
	2015A	2016E	2016E	2017E	2017E
1Q-Mar	0.0		0.0A		
2Q-Jun	0.0		0.0A		
3Q-Sep	0.0		0.0E		
4Q-Dec	0.0		0.0E		
FY	0.0		0.0E		0.0E

#### Company Description:

Neuralstem, Inc. (http://www.neuralstem.com) is an emerging firm developing neurology-focused drugs.

# Neuralstem, Inc. Rating: Not Rated

# Initiating with a Buy and \$2.25 PT

# **Investment Highlights:**

We are initiating coverage of Neuralstem, Inc., with a Buy rating and \$2.25 target price.

The company is currently enrolling a Phase II (n=220) trial for NSI-189, a novel neurogenic small molecule targeting Major Depressive Disorder (MDD) which, based on recent preclinical data, has the potential to be a neuroregenerative drug in reversing diabetic neuropathies. This trial is already 50% enrolled, and we expect a read out of this trial in 2H17.

The company recently secured an additional \$20 million through Tianjin Pharmaceutical Holding Group for completion of the Phase II trial. Assuming the Phase II is successful, we expect NSI-189 will have no problem finding a partner to fund a Phase III study, especially if results continue to show duration, improved cognition and enhanced potentiation.

The company is also developing a stem cell platform, which it looks to fund externally.

Cash position: The company had \$11.1 million in cash at the end of 2Q16, and on September 12th announced a definitive agreement with Tianjin Pharmaceutical Holding Group to receive gross proceeds of \$20 million primarily for the development of NSI-189. Assuming success of the Phase II, we expect that Neuralstem will look for a partner to fund a larger Phase III.

**Valuation**: We derive our target price of \$2.25 based on a DCF valuation, assuming a 35% discount rate that is applied to all cash flows and the terminal value, which is based on a 5x multiple of Neuralstem's projected 2022 EBITDA.

**Risks**: This represents a speculative investment only for those willing to take on risk. Risks to the achievement of our target price include clinical, regulatory, financing, competitive risks, as well as stock price volatility.

NSI-189 is a novel neurogenic small molecule targeting Major Depressive Disorder (MDD) that has the potential to be a neuroregenerative drug in reversing diabetic neuropathies. Neuralstem began enrolling patients in May into its multi-site (12 center) Phase II trial (n=220) with NSI-189 for MDD, with results expected in 2H17. On Sept 21, the company announced that the trial was 50% enrolled, well ahead of schedule. Dr. Fava, the principal investigator, is using the SAFER remote patient interview performed by an outside trained psychiatrist to prudently enroll patients with accurately diagnosed MDD. Phase II will incorporate the BID (2x daily) and QD (daily) doses of NSI-189 versus placebo and dose patients for 90 days. The Phase II trial will utilize a sequential parallel comparison design in order to reduce the placebo response and conduct a more informative trial with fewer patients. This trial is powered to show a statistically significant improvement in Montgomery-Asberg Depression Rating Scale (MADRS) scores, the standard measure for depression trials.

Phase Ib results showed a trend towards improved MADRS scores and statistical significance in patient self-evaluation. MADRS is the more robust measure and standard used in depression trials. Notably, NSI-189 showed duration of efficacy (the period after dosing Day 28 to Day 84 after) and a statistical improvement in cognition. In June, Neuralstem announced additional in vitro data on NSI-189, providing mechanistic details which could help uncover the drug's novel mechanism of action. NSI-189 showed enhancement of both short-term potentiation (STP) and long-term potentiation (LTP) in C57BI/6 mice and restored LTP in Angelman syndrome mice. LTP is an important biomarker of memory, and we believe that the preclinical data provided a cellular explanation for the long duration of efficacy observed in the NSI-189 Phase 1b trial. The novel cognitive mechanism of NSI-189, along with its rapid onset of action and durability of effect, has the potential to treat MDD, although this result must still be replicated in larger trials.

**Stem Cell Therapy Programs (NS1-189):** The company has also developed proprietary technology for regionally implanting neural stem cells for central nervous system indications including: 1) Amyotrophic Lateral Sclorosis (ALS), (completed a Phase IIa); 2) chronic spinal cord injury (in Phase I follow up); and 3) ischemic stroke (in Phase I follow up). The company plans to fund these programs externally.

Neuralstem, Inc.												
Income Statement												
Fiscal Year ends December												
(in \$000, except per share items)												
	2011A	2012A	2013A	2014A	2015A	1Q16A	2Q16A	3Q16E	4Q16E	2016E	2017E	2018E
NSI-566 revenue			-	-	-	-	-	-	-	-	-	-
NSI-189 royalty			-	-	-	-	-	-	-	-	-	-
Other revenue	391	408	110	19	10	3	3	3	3	10	10	10
Total Revenue	391	408	110	19	10	3	3	3	3	10	10	10
COGS												
R&D	7,355	6,106	7,134	8,135	12,637	3,066	2,475	2,970	3,563	12,074	16,903	18,593
SG&A	5,839	4,247	5,255	8,971	6,530	3,171	1,362	1,430	1,502	7,465	7,838	8,230
Depreciation & amortization	187	211	245	349	84			-	-	-	-	-
Total Operating Expenses	13,381	10,564	12,634	17,455	19,251	6,237	3,837	4,400	5,065	19,539	24,742	26,824
Operating Income	(12,990)	(10,156)	(12,524)	(17,436)	(19,241)	(6,235)	(3,834)	(4,397)	(5,063)	(19,529)	(24,732)	(26,814)
Interest income	61	34	68	68	70	11	13	18	18	60	54	49
Interest expense	(1)	(3)	(1,394)	(1,621)	(1,816)	(387)	(322)	(404)	(404)	(1,517)	(1,366)	(1,229)
Warrant modification expense			(5,017)	(3,110)	-							
Gain (loss) from change in fair value of derivative instruments			(965)	(334)	-		757					
Other	412	3	1	(196)	(716)	3	(467)					
Pretax income	(12,519)	(10,122)	(19,832)	(22,629)	(21,704)	(6,608)	(3,853)	(4,783)	(5,449)	(20,986)	(26,043)	(27,994)
Provision for income tax (benefit)				-	-						0	0
Net Income	(12,519)	(10,122)	(19,832)	(22,629)	(21,704)	(6,608)	(3,853)	(4,783)	(5,449)	(20,986)	(26,043)	(27,994)
	(0.26)	(0.17)	(0.27)	(0.26)	(0.24)	(0.07)	(0.04)	(0.04)	(0.04)	(0.18)	(0.17)	(0.18)
EPS	(0.26)	(,										
EPS EPS diluted, GAAP	(0.26)	(0.17)	(0.27)	(0.26)	(0.24)	(0.07)	(0.04)	(0.04)	(0.04)	(0.18)	(0.17)	(0.18)
I		• •	<b>(0.27)</b> 72,279	<b>(0.26)</b> 87,086	<b>(0.24)</b> 90,867	<b>(0.07)</b> 92,010	( <b>0.04</b> ) 105,836	<b>(0.04)</b> 114,586	<b>(0.04)</b> 144,232	<b>(0.18)</b> 114,166	<b>(0.17)</b> 151,444	<b>(0.18)</b> 159,016
EPS diluted, GAAP	(0.26)	(0.17)							` '			

	Demographics	2011A	2012A	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
	US Population	311.6E+6	313.9E+6	316.4E+6	319.0E+6	321.4E+6	323.8E+6	326.2E+6	328.6E+6	331.1E+6	333.9E+6	336.4E+6	338.9E+6
	Pop over 18 yo	239.9E+6	241.7E+6	243.7E+6	245.6E+6	247.4E+6	249.3E+6	251.2E+6	253.1E+6	255.0E+6	257.1E+6	259.0E+6	261.0E+6
	E.U. Population	493.5E+6	494.0E+6	494.5E+6	495.0E+6	495.5E+6	496.0E+6	496.5E+6	497.0E+6	497.5E+6	498.0E+6	498.5E+6	498.9E+6
	Pop over 18 yo	380.0E+6	380.4E+6	380.7E+6	381.1E+6	381.5E+6	381.9E+6	382.3E+6	382.7E+6	383.0E+6	383.4E+6	383.8E+6	384.2E+6
	ROW population	693.5E+6	694.0E+6	694.5E+6	695.0E+6	695.5E+6	696.0E+6	696.5E+6	697.0E+6	697.5E+6	697.9E+6	698.4E+6	698.9E+6
								Ph2 data	Ph3 data	approval			
	US market for depression ('000)	2011A	2012A	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
ē	Prevalence of depression	15,595	15,711	15,837	15,965	16,084	16,205	16,326	16,449	16,572	16,711	16,837	16,963
essi	Patients uncontrolled w 1 generic	5,146	5,185	5,226	5,268	5,308	5,348	5,388	5,428	5,469	5,515	5,556	5,598
epr	% adoption									1.0%	2.0%	3.5%	5.3%
	NSI-189 patients	-	-	-	-	-	-	-	-	55	110	194	294
	Annual treatment cost									\$ 3,600	\$ 3,708	\$ 3,819	\$ 3,934
NS	Total US NSI-189 revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$196,878	\$408,977	\$742,710	\$1,156,093
	Total US NSI-189 royalty to CUR	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,688	\$40,898	\$74,271	\$115,609
	EU market for depression ('000)	2011E	2012E	2013E	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E
sion	Prevalence of depression	32,077	32,109	32,129	32,161	32,206	32,238	32,270	32,302	32,335	32,367	32,399	32,432
essi	Patients uncontrolled w 1 generic	10,585	10,596	10,603	10,613	10,628	10,638	10,649	10,660	10,670	10,681	10,692	10,702
epre	% adoption										1.0%	2.5%	3.0%
б	NSI-189 patients	-	-	-	-	-	-	-	-	-	107	267	321
	Annual treatment cost									\$ 2,880	\$ 2,966	\$ 3,055	\$ 3,147
NSI	Total EU NSI-189 revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$316,843	\$816,688	\$1,010,435
	Total EU NSI-189 royalty to CUR	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$31,684	\$81,669	\$101,044

\$0

\$0

\$0

\$0

\$19,688

\$72,582

\$155,940

\$216,653

Source: Aegis Capital Corp. estimates

Total royalty from NSI-189 in depression

\$0

\$0

\$0

## **Required Disclosures**

#### **Price Target**

Our 12-month price target is \$2.25.

# Valuation Methodology

We derive our target price of \$2.25 based on a DCF valuation, assuming a 35% discount rate that is applied to all cash flows and the terminal value, which is based on a 5x multiple of Neuralstem's projected 2022 EBITDA.

#### **Risk Factors**

Various factors may impede or prevent achievement of the price target by the company's shares. Such risk factors may include, but are not limited to, clinical, regulatory, competitive, financial, and reimbursement issues. Drugs that have yet to be submitted to regulatory agencies for review may not reach the market due to regulatory concerns, which could preclude drug approval. The company may require financing to sustain and grow its pipeline, which could be dilutive to current shareholders. We expect competition from existing entities against the company's products. Sales of the firm's solutions could be affected by reimbursement decisions made by private insurers as well as government agencies.

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#### Investment Banking Services/Past 12 Mos.

Rating	Percent	Percent
BUY [BUY]	86.90	45.21
HOLD [HOLD]	13.10	36.36
SELL [SELL]	0.00	0.00

#### Meaning of Ratings

- A) A Buy rating is assigned when we do not believe the stock price adequately reflects a company's prospects over 12-18 months.
- B) A Hold rating is assigned when we believe the stock price adequately reflects a company's prospects over 12-18 months.
- C) A Sell rating is assigned when we believe the stock price more than adequately reflects a company's prospects over 12-18 months.

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