

Adamas Pharmaceuticals, Inc.

Pivotal Phase III Study Initiated and IP Portfolio Expanded for ADS-5102; Maintaining Outperform

- Tuesday morning, June 10, Adamas announced the initiation of its Phase III pivotal study, EASE LID, which will enroll roughly 130 patients and treat patients with ADS-5102, administered once a day at bedtime for 26 weeks in a randomized placebo controlled trial. The primary endpoint will be a reduction in Parkinson's levodopa-induced dyskinesia (LID) as measured by the Unified Dyskinesia Rating Scale (UDysRS).
- We believe the study design suggests a high probability for success given the company's clinical experience with ADS-5102 to date in combination with the literature for immediate-release amantadine for the treatment of LID in Parkinson's patients. The company's previous trial, the Phase II/III EASED (extended-release amantadine safety and efficacy study in levodopa-induced dyskinesia) study, was a randomized, double-blind, multicenter study that tested three different doses of ADS-5102 (260 mg, 340 mg, and 420 mg) as well as placebo. The primary outcome measure of the study was also the change from baseline in UDysRS, but over an eight-week period. The EASED study met its primary endpoint, wherein both the 340 mg and 420 mg doses significantly reduced LID with strong statistical significance ($p=0.005$ and $p=0.013$, respectively). In addition, a statistically significant reduction in LID from placebo was seen as early as two weeks following the first dose of ADS-5102. In addition, Parkinson's disease patient diaries showed statistically significant differences in "ON" time without dyskinesia from placebo (11.0 hours, 11.5 hours, and 12.1 hours for the 260 mg, 340 mg, and 420 mg doses, respectively, versus 8.0 hours for placebo). The three-hour increase in ON time and 0.9-hour decrease in "OFF" time as well, as the roughly 17% decrease in LID observed to date, look to be best in class versus the other formulations of levodopa and carbidopa.
- There has been mixed data on the duration of benefit for patients over a one-year time frame. Some smaller, investigator-led studies have suggested that the effects of amantadine wane beyond 30 days (Schwab RS, JAMA 1972), while some suggest the efficacy might wane over five to seven months of therapy (Shannon KM, *Clinical Neuropharmacology* 1987 and Thomas A et al. *J Neurol Neurosurg Psychiatry* 2004) when dosed with the immediate-release formulation at 300 mg per day. However, more recent studies using randomized discontinuation of amantadine therapy in patients who had been on therapy for over one year suggested that the benefits continued longer term (Wolf, *Movement Disorders* 2010 and Metman, *JAMA Neurology* 1999).
- In tandem with the Phase III initiation, the company announced that it was issued U.S. Patent '343 for the administration of certain formulations of amantadine HCl (including ADS-5102) prior to bedtime. This patent adds to the two current method-of-use patents for ADS-5102 with expirations in 2027 and 2030. All approved patents and five U.S. patent applications are wholly owned by the company. Recently Adamas received a \$25 million milestone payment for an accepted NDA for MDX-8704, a fixed-dose combination of Namenda XR/donepezil.

Adamas Pharmaceuticals is a developer of specialty therapeutics for the treatment of disorders affecting the central nervous system. The company is based in Emeryville, California.

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June 10, 2014

Stock Rating: **Outperform**
Company Profile: **Aggressive Growth**
Price Target: \$35.00

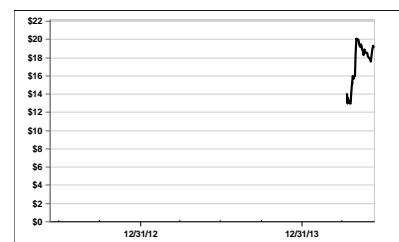
Symbol: ADMS (NASDAQ)
Price: \$19.47 (52-Wk.: \$12-\$22)
Market Value (mil.): \$323
Fiscal Year End: December
Long-Term EPS Growth Rate:
Dividend/Yield: None

	2013A	2014E	2015E
Estimates			
EPS Q1	NA	A\$-0.67	NA
Q2	NA	\$2.07	NA
Q3	NA	\$-0.68	NA
Q4	NA	\$-0.80	NA
FY	\$5.99	\$-0.10	\$0.40
CY		\$-0.10	\$0.40
Sales (mil.)	71	26	36
Valuation			
FY P/E	3.3x	NM	48.7x
CY P/E		NM	48.7x

Trading Data (FactSet)	
Shares Outstanding (mil.)	10
Float (mil.)	4
Average Daily Volume	118,569

Financial Data (FactSet)	
Long-Term Debt/Total Capital (MRQ)	0.0
Book Value Per Share (MRQ)	5.4
Return on Equity (TTM)	69.1

Two-Year Price Performance Chart



Sources: FactSet and William Blair estimates

Forest Laboratories (FRX \$93.80) had paid Adamas a \$65 million up-front cash payment in 2012 as well as a \$40 million payment in fourth quarter 2013 as part of the partnership. In addition to these milestone payments, Adamas will receive up to a \$30 million payment upon FDA approval, totaling \$95 million in development milestones (in addition to the \$65 million up-front payment) for MDX-8704 through FDA approval. Royalties on U.S. net sales of Namenda XR and MDX-8704 are set to begin five years after launch, or in 2018 and 2019, respectively. We believe the ongoing commitment by Actavis (ACT \$207.39), a leader in generics, to the MDX-8704 program continues to validate the Adamas IP strategy of patents based on unique pharmacokinetic profiles tied to best-in-class efficacy.

- We rate shares Outperform based on our belief that ADS-5102 is an effective compound that should produce best-in-class ON/OFF time and reductions in dyskinesia in levodopa-induced dyskinesia. The initiation of the company's Phase III EASE LID study, the recent NDA submission, and the subsequent \$25 million milestone payment show that it is properly executing on stated goals. In addition, we believe the wholly owned ADS-5102 provides clear benefits over immediate-release amantadine given our review of literature available in this setting. We ultimately believe the product will gain significant penetration into the moderate and severe Parkinson's disease patient population, and we estimate peak-year sales to exceed \$500 million.

Valuation

We derive our \$35 price target from a risk-adjusted net present value (NPV) for the company's royalty stream, from both Namenda XR and MDX-8704. Adamas's royalty stream for both products will not begin until five years after launch. For our valuation of ADS-5102, we assume the product will launch in 2017, following the company's second Phase III study in 2016 and subsequent filing that year. Given the strength of data to date and the known efficacy of amantadine in Parkinson's disease, we are risk-adjusting the probability of success by 75%. We assume peak-year sales six years after launch, which we believe is conservative given the familiarity of physicians treating with amantadine. We continue to assign an Outperform rating to shares of Adamas Pharmaceuticals.

Risks

An investment in shares of Adamas Pharmaceuticals involves clinical, regulatory, and financial risks that are typical for developmental-stage biopharmaceutical companies. We estimate that Adamas will be profitable over 2014 and 2015; however, the company might incur losses beginning in 2016 as preparations begin for the launch of ADS-5102. In addition to the risks associated with ADS-5102 development, there are intellectual property, manufacturing, and competition risks to consider.



Adamas Pharmaceuticals
Earnings Model
6/10/14
(\$ in millions except EPS data)

Rating: Outperform
Company Profile: Aggressive Growth
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	2011(A)	2012(A)	2013(A)	Q1(A)	Q2(E)	Q3(E)	Q4(E)	2014(E)	2015(E)	2016(E)	2017(E)	2018(E)
Product Revenue	-	-	-	-	-	-	-	-	-	-	-	-
ADS-5102	-	-	-	-	-	-	-	-	-	-	17,228	105,570
Royalty/Milestone Revenue	1,982	37,471	71,095	176	25,000	180	180	25,536	36,000	4,000	4,000	6,263
Total Revenue	1,982	37,471	71,095	176	25,000	180	180	25,536	36,000	4,000	21,227.8	111,833.4
yr/yr growth	NA	NA	NM	NA	NA	NA	NA	NM	41.0%	-88.9%	NM	426.8%
q/q growth	NA	NA		NA	14104.5%	-99.7%	0.0%					
incremental rev q/q												
Cost of Goods Sold	-	-	-	-	-	-	-	-	-	-	1,723	10,557
Gross Profit	1,982	37,471	71,095	176	25,000	180	180	25,536	36,000	4,000	19,505	101,276
SG&A	3,388	8,330	6,667	2,758	3,300	3,500	3,600	13,158	16,000	29,500	35,400	38,940
Growth								97%	22%	40%	20%	10%
R&D	6,652	9,192	7,410	3,109	3,500.0	3,800.0	5,000.0	15,375	17,000	20,000	23,000	25,300
Growth			-19%	-	-	-	-	107%	11%	18%	15%	10%
Total Operating Expenses	10,040	17,522	14,077	5,867	6,800	7,300	8,600	28,567	33,000	49,500	58,400	64,240
growth				NA	NA	NA	NA	103%	16%	50%	18%	10%
Operating Income	(8,058)	19,949	57,018	(5,691)	18,200	(7,120)	(8,420)	(3,031)	3,000	(45,500)	(38,895.0)	37,036.4
EBIT Margin								NM	NM	NM	NM	33%
growth y/y (%)				NA	NA	NA	NA	NM	NM	NM	NM	NM
Depreciation and Amortization	-	-	1,322.3	-	250	250	250	1,000	1,000	1,000	1,000	1,000
EBITDA		19,949.0	58,340.3	(5,691)	18,450	(6,870)	(8,170)	(2,281.0)	4,000.0	(44,500.0)	(37,895)	38,036
Interest and other income (expense)	(138)	(1,537)	(4,818)	-688	750.0	750.0	750.0	3,000	2,000	1,500	1,500	8,000
Interest expense	(29)	(376)	(88)					NM	NM	NM	NM	34%
Income Before Taxes	(8,225.0)	18,036	52,112	(6,379)	18,950	(6,370)	(7,670)	(1,469)	5,000	(44,000)	(37,395)	45,036
Income Tax Provision	(19)	(300)	(1,191)	1	(948)	225	225	(497)	1,000	1,000	(7,479)	11,709
Effective Tax Rate			2.3%	NA	5.0%	NA	NA	NM	NA	NA	20%	26%
Net Income	\$ (8,244.0)	\$ 17,736.0	\$ 33,068	(6,380)	19,898	(6,595)	(7,895)	\$ (972.4)	4,000	(45,000)	(29,916)	33,327
Net income to common (diluted)	\$ (8,980.0)	\$ 11,596.0	\$ 35,353	(6,380)	19,898	(6,595)	(7,895)	\$ (972.4)	4,000	(45,000)	(29,916)	33,327
Net income to common per share (diluted)	\$ (3.12)	\$ 2.34	\$ 5.99	(0.67)	2.07	(0.68)	(0.80)	(0.10)	0.40	(4.30)	(2.75)	2.18
Basic avg. number of shares used in computing net income	2,878	4,744	4,753	9,525	9,625	9,725	9,825	9,675	10,075	10,475	10,875	14,125
Diluted avg. number of shares used in computing net income	2,878	4,962	5,903	9,525	9,625	9,725	9,825	9,675	10,075	10,475	10,875	15,275

Key Ratios (GAAP unless noted)

Gross Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	90.0%	90.0%
R&D (% Total Rev.)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	108.3%	22.6%
SG&A (% Total Rev.)	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	166.8%	34.8%
Operating Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-183.2%	33.1%
Net Income Margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	-140.9%	29.8%
Revenue Growth												
Growth Yr/Yr	NM	90%	NM	NM	NM	NM	NM	NM	NM	NM	431%	427%
Growth Q/Q	NM			NM	NM	NM	NM					
SG&A Growth												
Growth Yr/Yr	NM	-20%	NM	NM	NM	NM	NM	97%	22%	84%	20%	10%
Growth Q/Q	NM		NM	NM	NM	NM	NM					
R&D Growth												
Growth Yr/Yr	NM	-19%	NM	NM	NM	NM	NM	107%	11%	18%	15%	10%
Growth Q/Q	NM		NM	NM	NM	NM	NM					

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William Blair is a market maker in the security of Adamas Pharmaceuticals, Inc. and may have a long or short position.

William Blair intends to seek investment banking compensation in the next three months from Adamas Pharmaceuticals, Inc.

Within the past 12 months William Blair has provided or is providing investment banking services to or has an investment services relationship with Adamas Pharmaceuticals, Inc.

Additional information is available upon request.

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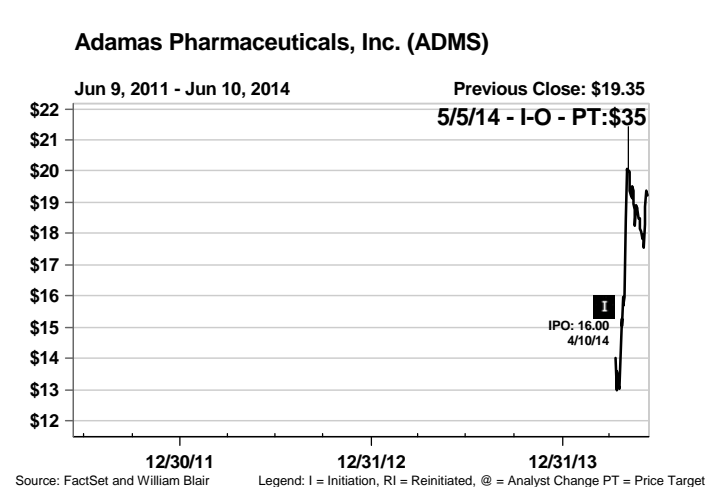
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DOW JONES: 16,943.10

S&P 500: 1,951.27

NASDAQ: 4,336.24



Current Rating Distribution (as of 05/31/14)

Coverage Universe	Percent	Inv. Banking Relationships*	Percent
Outperform (Buy)	67	Outperform (Buy)	15
Market Perform (Hold)	30	Market Perform (Hold)	2
Underperform (Sell)	1	Underperform (Sell)	0

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