

	Annual EPS	Annual Revenue	Target	Target		
Today's Changes	No changes	No changes	\$58 from \$40			

SAGE Therapeutics

BUY SAGE: NASDAO: US\$38.72

Target: US\$58.00 ↑

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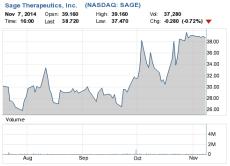
COMPANY STATISTICS:

Forecast Return: 50%
Market Cap (M): US\$927
52-week Range: 24.25 - 41.01
Avg. Daily Vol. (000s): 432.1

EARNINGS SUMMARY:

	O.11.111	*****		
FYE Dec		2014E	2015E	2016E
P/Sales:		NM	NM	NM
P/E:		NM	NM	NM
Revenue (M):	Q1	0.0A	0.0	-
	Q2	0.0A	0.0	-
	Q3	0.0	0.0	-
	Q4	0.0	0.0	-
Total		0.0	0.0	0.0
EPS:	Q1	(3.70)A	(0.39)	-
	Q2	(4.57)A	(0.35)	-
	Q3	(0.30)	(0.37)	-
	Q4	(0.42)	(0.40)	-
Total		(1.84)	(1.51)	(1.54)

SHARE PRICE PERFORMANCE:



Source: Interactive Data Corporation

COMPANY DESCRIPTION:

SAGE Therapeutics is a development/clinical stage biopharmaceutical company founded in 2010 that is focused on developing and commercializing drugs to treat central nervous system (CNS) disorders where no effective or FDA approved options exist.

All amounts in US\$ unless otherwise noted.

Life Sciences -- Biotechnology

RAISING PT TO \$58 ON PUBLISHED PEDIATRIC DATA

Investment highlights

Published data shows details on heavily refractory patients

Recently published data for SAGE-547 in n=2 pediatric patients with super refractory status epilepticus discussed both patients being weaned off of anesthesia and the epilepsy was resolved. One patient, an 11-year-old girl, was treated with n=20 different medications before receiving 547, after which the patient eventually returned home.

Early look at safety encouraging

Although limited to only n=2 patients, laboratory tests did not detect any adverse drug effects related to SAGE-547, which we find encouraging. Also, therapeutic levels slightly below 150 nM achieved the desired therapeutic result, suggesting lower doses might be effective, potentially lowering any safety concern.

Await additional data for 547 by YE14/early 2015

We expect Sage to present additional data for 547 discussing the number of patients successfully weaned off anesthesia as well as the number of attempts. We expect the data to be positive and push shares higher.

Raising price target to \$58

We are raising our price target to \$58 ahead of upcoming data based on an average of our NPV and P/S valuations. Our NPV valuation estimates a \$40 value for the stock, and our P/S valuation estimates a \$75 value for the stock.

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VALUATION

Figure 1: NPV and P/S valuation

Valuation method	Value/share
Net Present Value	\$40
Price to Sales	\$75
Average	\$58

Source: Canaccord Genuity, Inc.

Figure 2: SAGE NPV valuation

Product	Peak Sales / Royalties (\$MM)	Year	NPV at launch	Probability Adjustment	Current Value (\$MM)	Value / Share
SAGE-547						
US	\$984	2020	\$2,148	55%	\$862	\$32
Ex-US - royalty	\$82	2024	\$177	55%	\$70	\$3
Total SAGE-547 revenues	\$1,066				\$933	
Total Product Value					933	\$35
Cash					149	\$6
Total Equity Value					1,082	\$40
Shares Outstanding (MM)					27	
		•				
Risk-Free Rate	3.0%					
Beta	1.8					
Risk Premium	4%					
Discount Rate	10%					

Source: Canaccord Genuity, Inc.



Figure 3: SAGE Price to Sales valuation

Product	Peak revenues	Year	probability	P/S	Value / share
SAGE-547					
US	\$984	2020	55%	6	66
Ex-US	\$82	2024	55%	6	4
Total Product Value					\$70
Cash					\$6
Total Equity Value					\$75
Shares Outstanding (MM)					27
Risk-Free Rate	3.0%				
Beta	1.8				
Risk Premium	4%				
Discount Rate	10%				

Source: Canaccord Genuity, Inc.



gure 4: SAGE Income Stater	ment												
			Sage 1	herape	eutics,	Inc.							
(000's) [FY - DEC]			J	•	•								
Revenues	2012A	2013A	1Q14A	2Q14A	3Q14E	4Q14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
SAGE-547													
US							-	-	-	-	81,823	337,154	607,793
Ex-US							-	-	-	-	51,888	52,148	209,633
Ex-US royalty									-	-	8,821	8,865	35,638
Total			-	-	-	-	-	-	-		90,644	346,019	643,431
Income Statement	2012A	2013A	1Q14A	2Q14A	3Q14E	4Q14E	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Total Revenue											90.644	346,019	643,431
COGS	-		•	•	-	-	-	-	-	-	9,064	34,602	64,343
Gross Profit	-		•	•	-	-	-	-	-	-	81,580	311,417	579,088
GIOSS FIOIIL	-	-	-	-	-	-	-	-	-	-	01,500	311,417	379,000
Operating Expenses													
Research and development	7,229	14,357	4,173	4,381	6,325	9,747	24,626	39,236	41,689	42,996	47,760	57,785	71,508
General and administrative	2,402	3,922	1,617	1,807	1,825	1,843	7,092	7,559	7,687	7,764	32,806	35,706	38,893
Total Operating Expense	9,631	18,279	5,790	6,188	8,150	11,591	31,718	46,795	49,376	50,760	80,565	93,491	110,401
EBITDA													
Operating income	(9,631)	(18,279)	(5,790)	(6,188)	(8,150)	(11,591)	(31,718)	(46,795)	(49,376)	(50,760)	1,015	217,926	468,687
Interest (expense) income, net	-	1	-	1	1	1	3	8	3	8	3	8	3
Other income (expense), net	(1)	(3)		(5)	(5)	(5)	(15)	(40)	(15)	(40)	(15)	(40)	(15)
Pre-tax income (GAAP)	(9,632)	(18,281)	(5,790)	(6,192)	(8,154)	(11,595)	(31,730)	(46,827)	(49,388)	(50,792)	1,003	217,894	468,675
Pre-tax income (non-GAAP)													
Taxes (GAAP)		-		-	-	_	-	-	-	-	371	80,621	173,410
Tax rate (GAAP)	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%	37%
Accretion of redeemable convertible preferred	(4)	(7)	(326)	(1,577)									
Net Income (GAAP)	(9,637)	(18,288)	(6,116)	(7,769)	(8,154)	(11,595)	(33,633)	(46,827)	(49,388)	(50,792)	632	137,273	295,265
GAAP EPS (diluted)	(\$8.62)	(\$12.26)	(\$3.70)	(\$4.57)	(\$0.30)	(\$0.42)	(\$1.84)	(\$1.51)	(\$1.54)	(\$1.44)	\$0.02	\$3.21	\$6.29
Diluted shares	1,118	1,492	1,653										
Pro forma - diluted shares		9,514	16,774	1,701	27,270	27,543	18,322	30,973	32,084	35,292	38,821	42,703	46,974

(\$1.51)

(\$1.54)

(\$1.44)

\$3.21

\$6.29

Source: Company reports, Canaccord Genuity estimates



Investment risks

Clinical trials for SAGE-547, 689, and 217 may ultimately fail, resulting in substantial downside to our estimates and price target. SAGE currently has no products approved by FDA or European regulatory agencies and has no revenues at present. Also, the exact number of patients suffering from super-refractory status epilepticus and other subsets of status epilepticus is not known. The actual number of SRSE patients may be smaller than modeled, which could result in difficulty enrolling clinical studies and longer clinical timelines. Smaller patient numbers could also result in lower revenues than our current estimates.

Later-stage clinical trials for SAGE-547 may fail despite encouraging initial data from emergency use cases, resulting in lack of clinical approval, revenues, and downside to our price target. In addition, safety signals may emerge in Phase 1/2 and Phase 3 studies that were not seen in the initial emergency use cases. Safety signals could prevent FDA approval if serious.

SAGE utilizes third parties, or clinical research organizations, to conduct its clinical studies for SAGE-547. Should these organizations conduct poor quality control, poor selection of clinical investigators, or improper statistical analysis, SAGE shares could be adversely impacted. Also, if the clinical research organization does not recruit the studies in a timely fashion, investors may become disappointed, creating downward pressure on the stock.

Even assuming regulatory approval, SAGE's products may not perform well in the marketplace, resulting in lower revenues. If the pace of the launch is too slow, investors may be disappointed, and shares may be under pressure.

Competitive products may emerge that generate better clinical data versus SAGE's pipeline. At present, SAGE's principal competitor is Marinus Pharmaceuticals, which is developing a reformulated form of Ganaxalone, a known GABA positive allosteric modulator neuroactive steroid, for potential treatment of drug-resistant partial complex seizures and fragile X syndrome. Also, many of SAGE's competitors have substantially more resources to fund clinical development, and may do so in a faster and/or more effective manner.

SAGE is also likely to need substantial additional funding going forward, potentially creating downward pressure related to financing. Research and development costs may be higher than we have anticipated, requiring additional capital and potential dilution. SAGE expects to continue to incur substantial operating losses for the foreseeable future. The company may never become profitable, or profitability may take much longer than originally anticipated, disappointing some investors and resulting in downside to the share price.



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Site Visit:

An analyst has not visited SAGE Therapeutics' material operations.

Price Chart:*



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Coverage Universe						
			IB Clients			
Rating	#	%	%			
Buy	627	60.2%	36.7%			
Speculative Buy	53	5.1%	54.7%			
Hold	317	30.5%	13.9%			

Sell	43	4.1%	2.3%
	1041	100.0%	

*Total includes stocks that are Under Review

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