

## Agios Pharmaceuticals

### Our Thoughts Post the 4Q Call

This morning, Agios reported a 4Q GAAP loss per share of \$0.40. Importantly, on the call, it was highlighted that initial phase 1 data for AG-221 would be presented at the upcoming American Association for Cancer Research meeting (AACR; 4/5-4/9, San Diego). We are encouraged that the AG-221 data will be presented in April, as initially readout was weighted towards YE14. In the presentation, given known pre-clinical data, we are expecting to see a decrease in 2-hydroxyglutarate (2-HG) levels. In our view, this would establish proof-of-concept in the clinical setting. Of note, there were no major updates for AG-120/AG-348, and both programs remain on track. Our Neutral rating currently balances early stage of key programs with strong scientific rationale.

- **AG-221:** On the call, it was noted that initial phase 1 data will be presented at the upcoming AACR meeting, which is well ahead of initial guidance of YE14. While Agios did not comment on what exactly would be presented at the meeting, we are expecting focus to be on safety/tolerability details, PK/PD, and 2-HG decreases. Expansion cohorts are expected to initiate in late 2014 (no change in timelines).
- **Other key programs:** AG-120 – Two phase 1 trials, one in hematologic malignancies and the other in solid tumors, is expected to start in early 2014 (no change in timelines). On the call, it was noted that initial trials would be focused on enrolling any patients with IDH1 mutations, rather than focus in specific disease indications. AG-348 – Single/multiple ascending dose studies are expected to start mid-2014 (no change in timelines).
- **Adjusting estimates:** We are updating our model to reflect actual 4Q results and q/q trends. We have fine-tuned our operating expenses. Our 2014-15 EPS estimates decrease to -\$1.33 and -\$0.51 from -\$0.92 and -\$0.24, respectively.
- **Reiterate Neutral rating.**

## Neutral

AGIO, AGIO US

Price: \$31.64

Price Target: \$35.00

### Biotechnology

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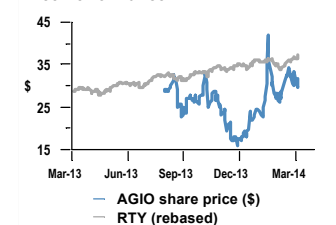
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### Price Performance



### Agios Pharmaceuticals (AGIO;AGIO US)

FYE Dec	2013A	2014E (Prev)	2014E (Curr)	2015E (Prev)	2015E (Curr)
Analyst Adjusted Diluted					
EPS (\$)					
Q1 (Mar)	(0.39)	-	(0.28)	-	-
Q2 (Jun)	(2.74)	-	(0.32)	-	-
Q3 (Sep)	(0.48)	-	(0.36)	-	-
Q4 (Dec)	(0.40)	-	(0.37)	-	-
FY	(2.83)	(0.92)	(1.33)	(0.24)	(0.51)

Source: Company data, Bloomberg, J.P. Morgan estimates.

### Company Data

Price (\$)	31.64
Date Of Price	05 Mar 14
52-week Range (\$)	44.04-15.77
Market Cap (\$ mn)	474.34
Fiscal Year End	Dec
Shares O/S (mn)	15
Price Target (\$)	35.00
Price Target End Date	30-Dec-14

### See page 5 for analyst certification and important disclosures.

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## Changes to Our Model

We are updating our model to reflect actual 4Q results and q/q trends. We have fine-tuned our operating expenses. Our 2014-15 EPS estimates decrease to -\$1.33 and -\$0.51 from -\$0.92 and -\$0.24, respectively.

Table 1: Change To Our Model - AGIO

	2014E OLD	2014E NEW	2015E OLD	2015E NEW
Total Revenue	35.1	35.2	65.1	65.5
R&D	57.0	67.2	62.6	70.6
SG&A	9.0	12.7	9.5	13.3
Total Op Ex	66.0	79.9	72.1	83.9
Net income	-32.8	-44.7	-9.0	-17.7
<b>GAAP EPS (\$)</b>	<b>-0.92</b>	<b>-1.33</b>	<b>-0.24</b>	<b>-0.51</b>
Shares	35.7	33.7	36.7	34.7

Source: J.P. Morgan estimates.

## Investment Thesis, Valuation and Risks

### Agios Pharmaceuticals *(Neutral; Price Target: \$35.00)*

#### Investment Thesis

Agios's core science focuses on identifying drug targets in dysregulated metabolic pathways. In particular, with the use of high throughput mass spectrometry and the "flux biochemistry" approach, many drug targets have been identified that modulate critical biological pathways. The company's three lead assets are early stage: AG-221 (IDH2m inhibitor) and AG-120 (IDH1m inhibitor), both for oncology indications, and AG-348 (PKR activator), for an orphan disease known as pyruvate kinase deficiency. The scientific rationale appears very robust to us, but only AG-221 is currently in phase 1 clinical studies. Our Neutral rating balances strong science and potential of differentiated therapeutics with the company's early development stage.

#### Valuation

Our December 2014 price target of \$35 for AGIO is based on a comparable company analysis. For comparables we use select biotech companies with a focus on oncology and orphan diseases. Our comparable group has a mean market cap of ~\$1B and a firm value of ~\$900M. Since Agios is currently in preclinical development relative to our comparable companies in clinical development, we apply what we consider an appropriate ~10% discount.

#### Risks to Rating and Price Target

Upside risks include 1) faster-than-anticipated development of lead assets, and 2) quicker path to market. Downside risks include 1) failure to show differentiated therapeutic benefit of lead assets or trial failure, 2) FDA requires long development pathway, and 3) out-year financing risk.

## Agios Pharmaceuticals: Summary of Financials

Income Statement - Annual	FY13A	FY14E	FY15E	FY16E	Income Statement - Quarterly	1Q14E	2Q14E	3Q14E	4Q14E
Revenues	26	36	66	31	Revenues	9	9	9	9
Cost of products sold	0	0	0	0	Cost of products sold	0	0	0	0
Gross profit	-	-	-	-	Gross profit	-	-	-	-
SG&A	(10)	(13)	(13)	(14)	SG&A	(3)	(3)	(3)	(3)
R&D	(55)	(67)	(71)	(74)	R&D	(15)	(16)	(18)	(18)
Operating income	(39)	(44)	(18)	(57)	Operating income	(9)	(11)	(12)	(13)
EBITDA	(39)	(44)	(18)	(57)	EBITDA	(9)	(11)	(12)	(13)
Net interest (income) / expense	(4)	(0)	1	1	Net interest (income) / expense	0	0	(0)	(0)
Other income / (expense)	-	-	-	-	Other income / (expense)	-	-	-	-
Income taxes	0	0	0	0	Income taxes	0	0	0	0
Net income - GAAP	(42)	(45)	(18)	(56)	Net income - GAAP	(9)	(10)	(12)	(13)
Net income - recurring	(42)	(45)	(18)	(56)	Net income - recurring	(9)	(10)	(12)	(13)
Diluted shares outstanding	15	34	35	36	Diluted shares outstanding	32	33	34	35
EPS - excluding non-recurring	(2.83)	(1.33)	(0.51)	(1.57)	EPS - excluding non-recurring	(0.28)	(0.32)	(0.36)	(0.37)
EPS - recurring	(2.83)	(1.33)	(0.51)	(1.57)	EPS - recurring	(0.28)	(0.32)	(0.36)	(0.37)
Balance Sheet and Cash Flow Data	FY13A	FY14E	FY15E	FY16E	Ratio Analysis	FY13A	FY14E	FY15E	FY16E
Cash and cash equivalents	180	132	115	-	Sales growth	1.8%	39.1%	84.4%	(52.2%)
Accounts receivable	-	-	-	-	EBIT growth	69.1%	14.0%	(58.7%)	210.0%
Inventories	-	-	-	-	EPS growth - recurring	139.9%	(53.1%)	(61.6%)	208.7%
Other current assets	2	1	2	-	Gross margin	-	-	-	-
Current assets	219	170	153	-	EBIT margin	(152.2%)	(124.7%)	(27.9%)	(181.3%)
PP&E	4	4	5	-	EBITDA margin	(152.2%)	(124.7%)	(27.9%)	(181.3%)
Total assets	226	174	158	-	Tax rate	(0.9%)	0.0%	0.0%	0.0%
Total debt	-	-	-	-	Net margin	(166.1%)	(125.7%)	(27.0%)	(179.3%)
Total liabilities	93	88	88	-	Net Debt / EBITDA	-	-	-	-
Shareholders' equity	133	86	70	-	Net Debt / Capital (book)	-	-	-	-
Net income (including charges)	(42)	(45)	(18)	-	Return on assets (ROA)	(23.3%)	(22.3%)	(10.6%)	(70.9%)
D&A	1	1	2	-	Return on equity (ROE)	(47.9%)	(40.7%)	(22.6%)	(160.2%)
Change in working capital	0	(5)	0	-	Enterprise value / sales	-	-	-	-
Other	8	1	1	-	Enterprise value / EBITDA	-	-	-	-
Cash flow from operations	(33)	(47)	(15)	-	Free cash flow yield	(6.5%)	(4.5%)	(1.6%)	(0.1%)
Capex	(2)	(2)	(2)	-					
Free cash flow	(31)	(48)	(17)	(1)					
Cash flow from investing activities	122	(2)	(2)	-					
Cash flow from financing activities	0	0	0	-					
Dividends	-	-	-	-					
Dividend yield	-	-	-	-					

Source: Company reports and J.P. Morgan estimates.

Note: \$ in millions (except per-share data). Fiscal year ends Dec

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Agios Pharmaceuticals (AGIO, AGIO US) Price Chart



Date	Rating	Share Price (\$)	Price Target (\$)
19-Aug-13	N	31.91	35.00

Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends.  
Initiated coverage Aug 19, 2013.

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