EARNINGS UPDATE
Biotechnology
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AGIOS PHARMACEUTICALS INC (NASDAQ:AGIO)

Reports Q3, IDH2 Trial Proceeding Well

Agios reported Q3 results and gave a pipeline update. The IDH2-mutant cancer trial is progressing well, with the IDH1-mutant cancer and PK deficiency trials on track to start in 2014. Pipeline proof of concept data are possible starting in H2:14, which we expect to drive value inflection in the shares.

Financial Update.

Agios reported Q3 revenue of $6.3MM, equal to our model, and OpEx of $17.3MM, slightly ahead of our $15MME. The company ended Q3 with $208MM in cash (including $111MM net proceeds from the July IPO and $12.8MM from a concurrent private placement with CELG), expected to be sufficient to fund operations through at least Q4:2016.

Many Clinical Milestones Expected In 2014.

The Phase I dose escalation trial on Agios' lead program, AGI-221 for IDH2-mutant cancer, is proceeding well, with 4 of 5 planned centers now recruiting patients. The trial is enrolling IDH2-mutant AML, MDS, and MPD patients, and Agios is hopeful that it may be in a position to report data (potentially including anti-cancer activity) at a medical meeting in late 2014. Meanwhile, IND enabling studies have been completed on AGI-120 for IDH1-mutant cancer and Phase I is expected to commence in early 2014. AGI-348 for PK deficiency is nearing completion of IND enabling studies and is expected to begin Phase I in 2014 as well.

Preclinical Updates On All Three Programs At ASH.

The ASH abstracts released today included preclinical updates on all three of Agios' lead programs, to be presented on Dec 9. AGI-221 demonstrates a dramatic survival advantage in an IDH2-mutant AML xenograft model, with 100% survival on high dose AGI-221 vs. 0% on placebo or chemotherapy. An IDH1 inhibitor compound shows synergy with Ara-C in an IDH1-mutant xenograft model. Finally, AGI-348 is able to restore ATP levels to normal in an ex-vivo experiment on cells from PKD patients.

Please see addendum of this report for important disclosures.

Recommendation

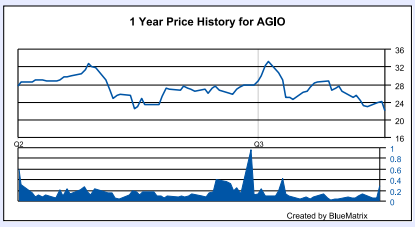
Rating:	Outperform
Price Target (in $):	NA
Dividend:	NA
Enterprise Value (MM):	$722.4

Stock Statistics as of 11/06/2013 (in $)

Price:	$22.00
52W Range:	$33.59-$18.00
Shares Out (MM):	31.0
Market Cap (MM):	$683.6
Net Debt (MM):	$0.0

Fundamentals

Revenue (MM) ('12A)	25.1
Revenue (MM) ('13E)	25.1
Revenue (MM) ('14E)	38.0
EV/S ('12)	28.8x
EV/S ('13)	28.8x
EV/S ('14)	19.0x
Earnings Per Share ('12A)	*$(1.19)*
Earnings Per Share ('13E)	*$(1.48)*
Earnings Per Share ('14E)	*$(1.15)*



Investment Thesis

Agios Pharmaceuticals is leveraging its leading expertise in cellular metabolism to develop therapeutics in two related areas: (1) cancer metabolism and (2) inborn errors of metabolism (IEMs). All of Agios' programs follow a "precision medicine" strategy, meaning that the targeted patients are well-defined and prospectively identifiable, that the drug candidates are tailored to meet the specific patient segments' needs, and that a biomarker is available to provide early proof of mechanism in humans. We applaud this approach, as we believe it drives to value inflection points quickly, while minimizing risk and potentially abbreviating time to market. Agios' lead candidates in cancer, AGI-221 and AGI-120, target several cancers mutant in the metabolic genes IDH2 and IDH1, respectively. AGI-221 entered Phase I in September, and AGI-120 will follow in early 2014. Each has shown encouraging preclinical efficacy, with preclinical updates expected at ASH 2013. We believe each has the potential to demonstrate clinical proof of concept in 2014, and estimate that they could generate $650MM+ and $450MM+ in global revenue, respectively. A partnership with Celgene provides nondilutive financing and validation of Agios' leadership position in cancer metabolism, while Agios retains meaningful economics. Agios' leading IEM candidate is AG-348 for pyruvate kinase deficiency, a rare form of hemolytic anemia. The unmet need is great in this indication, and there may be 1,000 - 3,000 diagnosed patients in the U.S. alone. AG-348 will enter Phase I in 2014, and we would expect proof of concept data by 2015. We believe AG-348 could generate $600MM+ in peak revenue, and is wholly owned by Agios. Following a $120MM+ IPO completed in July, Agios has over $220MM in cash, and including expected payments under the Celgene collaboration, should be funded at least through 2017. We expect multiple value-creating clinical readouts to drive stock outperformance over the next 12-18 months.

Agios Upcoming Milestones

Event	Timing
Preclinical data presentations on clinical candidates (at ASH)	December 9
Begin enrollment in AGI-120's Phase I trials in IDH1m cancers	Early 2014
Begin enrollment in AG-348's Phase I trial in PK deficiency	2014
Possible initial proof of mechanism data for AGI-221 in IDH2m liquid tumors, start of Phase II expansion cohorts	Q4:14
Begin enrollment in Phase I for glutaminase inhibitor program	H2:14
Possible initial proof of mechanism data for AGI-120 in IDH1m tumors, start of Phase II expansion cohorts	H2:14/H1:15
Possible initial proof of mechanism data for AGI-348 in PK deficiency	H2:14/2015

Source: Cowen and Company

Agios Pharmaceuticals Quarterly P&L Model ($MM)

	Q1:13A	Q2:13A	Q3:13A	Q4:13E	2013E	Q1:14E	Q2:14E	Q3:14E	Q4:14E	2014E
Product Revenue										
Collaboration Revenue	6.3	6.3	6.3	6.3	25.1	6.3	7.0	14.0	10.7	38.0
Total Revenue	**6.3**	**6.3**	**6.3**	**6.3**	**25.1**	**6.3**	**7.0**	**14.0**	**10.7**	**38.0**
COGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R&D	11.5	13.0	14.8	15.0	54.2	15.5	16.0	16.5	16.7	64.7
SG&A	1.9	1.8	2.5	2.6	8.8	2.9	3.0	3.0	3.1	12.0
Total Expenses	**13.3**	**14.8**	**17.3**	**17.6**	**63.0**	**18.4**	**19.0**	**19.5**	**19.8**	**76.7**
Operating Income/ Loss	**(7.0)**	**(8.5)**	**(11.1)**	**(11.3)**	**(37.9)**	**(12.1)**	**(12.0)**	**(5.5)**	**(9.1)**	**(38.7)**
Non-Operating Income	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pre-tax Income/ Loss	**(7.0)**	**(8.5)**	**(11.1)**	**(11.3)**	**(37.9)**	**(12.1)**	**(12.0)**	**(5.5)**	**(9.1)**	**(38.7)**
Tax rate (%)	*NM*	*NM*	*NM*	*NM*	*NM*	*NM*	*NM*	*NM*	*NM*	*NM*
Provision for income taxes	0.2	0.1	0.1	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Net Income (Loss) From Operations	**(7.2)**	**(8.6)**	**(11.2)**	**(11.3)**	**(38.3)**	**(12.1)**	**(12.0)**	**(5.5)**	**(9.1)**	**(38.7)**
Cumulative Preferred Stock Dividends	(1.8)	(1.8)	(0.6)							
GAAP EPS	**($0.37)**	**($0.34)**	**($0.49)**	**($0.36)**	**($1.48)**	**($0.37)**	**($0.36)**	**($0.16)**	**($0.26)**	**($1.15)**
Diluted Shares	24.1	25.0	22.7	31.5	25.8	32.8	33.4	33.7	34.7	33.7

Source: Cowen and Company

Agios Pharmaceuticals Annual P&L Model ($MM)

	2012A	2013E	2014E	2015E	2016E	2017E	2018E
Product Revenue	0.0	0.0	0.0	0.0	0.0	0.0	8.0
Collaboration Revenue	25.1	25.1	38.0	55.0	67.0	25.0	27.0
Total Revenue	**25.1**	**25.1**	**38.0**	**55.0**	**67.0**	**25.0**	**35.0**
COGS	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R&D	41.0	54.2	64.7	70.0	74.0	76.0	78.0
SG&A	7.1	8.8	12.0	15.0	16.0	18.0	40.0
Total Expenses	**48.1**	**63.0**	**76.7**	**85.0**	**90.0**	**94.0**	**118.0**
Operating Income/ Loss	**(23.0)**	**(37.9)**	**(38.7)**	**(30.0)**	**(23.0)**	**(69.0)**	**(83.0)**
Non-Operating Income	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Pre-tax Income/ Loss	**(22.9)**	**(37.9)**	**(38.7)**	**(30.0)**	**(23.0)**	**(69.0)**	**(83.0)**
Tax rate (%)	*NM*	*NM*	*NM*	*NM*	*NM*	*NM*	*NM*
Provision for income taxes	(2.8)	0.4	0.0	0.0	0.0	0.0	0.0
Net Income (Loss) From Operations	**(20.1)**	**(38.3)**	**(38.7)**	**(30.0)**	**(23.0)**	**(69.0)**	**(83.0)**
GAAP EPS	**($1.19)**	**($1.48)**	**($1.15)**	**($0.85)**	**($0.60)**	**($1.75)**	**($1.90)**
Diluted Shares	23.0	25.8	33.7	35.5	38.2	39.5	43.8

Source: Cowen and Company

Valuation Methodology & Investment Risks

Valuation Methodology

Biotechnology:

In calculating our 12-month target price, we employ one or more valuation methodologies, which include a discounted earnings analysis, discounted cash flow analysis, net present value analysis and/or a comparable company analysis. These analyses may or may not require the use of objective measures such as price-to-earnings or price-to-sales multiples as well as subjective measures such as discount rates.

We make investment recommendations on early stage (pre-commercial) biotechnology companies based upon an assessment of their technology, the probability of pipeline success, and the potential market opportunity in the event of success. However, because these companies lack traditional financial metrics, we do not believe there are any good methodologies for assigning a specific target price to such stocks.

Investment Risks

Biotechnology:

There are multiple risks that are inherent with an investment in the biotechnology sector. Beyond systemic risk, there is also clinical, regulatory, and commercial risk. Additionally, biotechnology companies require significant amounts of capital in order to develop their clinical programs. The capital-raising environment is always changing and there is risk that necessary capital to complete development may not be readily available.

Company Specific Risks

Agios Pharmaceuticals is developing several, currently preclinical, drug candidates in the areas of cancer metabolism and inborn errors of metabolism. All of Agios' drug candidates face clinical and regualtory risk. With the future development path depending on the evolution of clinical data, future revenue forecasts are uncertain. The commercial outlook for Agios' candidates could additionally be altered by safety/efficacy findings, emerging competition, alterations in the medical treatment paradigm, or changes in the pricing environment. Some of Agios' projected market exclusivity depends on patents, which are subject to challenge by generic drugmakers.

Addendum

STOCKS MENTIONED IN IMPORTANT DISCLOSURES

Ticker	Company Name
AGIO	Agios Pharmaceuticals Inc

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Cowen and Company Rating System effective May 25, 2013

Outperform (1): The stock is expected to achieve a total positive return of at least 15% over the next 12 months

Market Perform (2): The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

Underperform (3): Stock is expected to achieve a total negative return of at least 10% over the next 12 months

Assumption: The expected total return calculation includes anticipated dividend yield

Cowen and Company Rating System until May 25, 2013

Outperform (1): Stock expected to outperform the S&P 500

Neutral (2): Stock expected to perform in line with the S&P 500

Underperform (3): Stock expected to underperform the S&P 500

Assumptions: Time horizon is 12 months; S&P 500 is flat over forecast period

Cowen Securities, formerly known as Dahlman Rose & Company, Rating System until May 25, 2013

Buy – The fundamentals/valuations of the subject company are improving and the investment return is expected to be 5 to 15 percentage points higher than the general market return

Sell – The fundamentals/valuations of the subject company are deteriorating and the investment return is expected to be 5 to 15 percentage points lower than the general market return

Hold – The fundamentals/valuations of the subject company are neither improving nor deteriorating and the investment return is expected to be in line with the general market return

COWEN AND COMPANY RATING ALLOCATION

Distribution of Ratings/Investment Banking Services (IB) as of 09/30/13

Rating	Count	Ratings Distribution	Count	IB Services/Past 12 Months
Buy (a)	394	58.72%	54	13.71%
Hold (b)	255	38.00%	5	1.96%
Sell (c)	22	3.28%	1	4.55%

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's ratings definitions.

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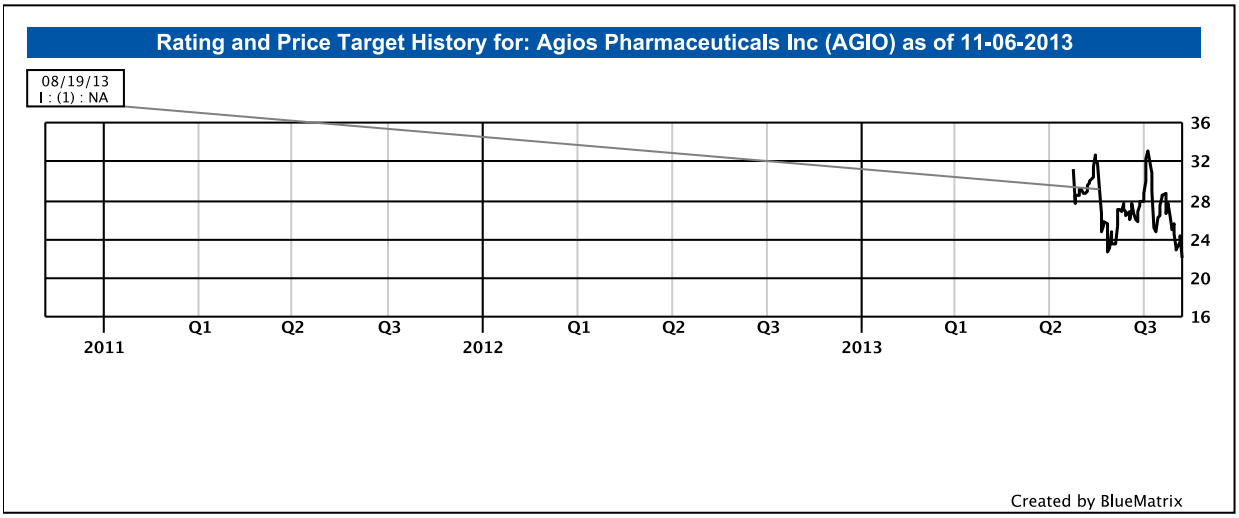

Legend for Price Chart:

I = Initation | 1 = Outperform | 2 = Market Perform | 3 = Underperform | UR = Price Target Under Review | T = Terminated Coverage | $xx = Price Target | NA = Not Available