

## Clovis Oncology

### 2Q Snapshot...Nearing the Final LEAP

We reiterate our OW rating on CLVS following an expectedly quiet 2Q12 report. Management reiterated 2012 cash burn guidance and provided a progress update on the pipeline. Most importantly, the company is still on track to report top-line data from the pivotal LEAP study for CO-101 in pancreatic cancer in 4Q.

- **Impact to our thesis: negligible.** We continue to see CLVS as a well positioned small cap biotech with a strong management team overseeing an emerging pipeline of intriguing oncology assets and a solid balance sheet. The key catalyst for CLVS will be pivotal CO-101 data anticipated before year end. If positive, this product could quickly become standard of care for roughly two-thirds of pancreatic cancer patients. Our 2013 PT of \$28 (unchanged from our December 2012 target) target currently assumes a 55% probability of approval with conservatively skewed commercial scenarios.
- **Key incremental takeaway: LEAP trial still on track for data in 4Q12, NSCLC trial initiated.** Mgmt still expects overall survival data from the ~360 pt LEAP trial by YE12 (although the timing is event driven). While high risk, we remain optimistic that the results will be positive given that ~64% of pts have a biomarker status (hENT1 low) that appears to be associated with responsiveness to CO-101 and not gemcitabine, the current standard of care. The company also recently initiated a Ph1 combo trial with cisplatin in NSCLC.
- **2Q results: in line with expectations.** CLVS reported EPS of (\$0.61), in line with both JPMe and consensus of (\$0.61), but this is not an earnings story.
- **Estimate revisions.** We have adjusted our model to reflect the quarter but remain within unchanged 2012 cash burn guidance of \$67-\$72M and YE2012 cash of ~\$140M.
- **Balance sheet status: good shape.** The company has \$177M in cash, including net proceeds of \$70.5M raised in 2Q from a secondary offering. Capital appears sufficient to fund operations through the LEAP study in 4Q12 and potential POC data for CO-1686 and rucaparib in 2013.
- **Key upcoming event: waiting for LEAP.** We expect to see progress with all 3 of the company's clinical programs in 2012, but obviously the critical event to watch for is top-line survival data from the pivotal LEAP trial expected in 4Q.

x

#### Clovis Oncology, Inc. (CLVS;CLVS US)

FYE Dec	2011A	2012E (Prev)	2012E (Curr)	2013E (Prev)	2013E (Curr)
EPS - Recurring (\$)					
Q1 (Mar)	(2.14)	(0.86)A	(0.86)A	-	-
Q2 (Jun)	(4.37)	(0.61)	(0.61)A	-	-
Q3 (Sep)	(1.38)	(0.64)	(0.65)	-	-
Q4 (Dec)	(1.30)	(0.68)	(0.68)	-	-
FY	(14.42)	(2.76)	(2.77)	(2.39)	(2.41)
Bloomberg EPS FY (\$)	(5.14)	-	(2.76)	-	(2.39)

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

#### See page 8 for analyst certification and important disclosures.

J.P. Morgan does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

## Overweight

CLVS, CLVS US

Price: \$15.36

Price Target: \$28.00

### Biotechnology

**Cory Kasimov** <sup>AC</sup>

(1-212) 622-5266

cory.w.kasimov@jpmorgan.com

**Karen Jay, Ph.D.**

(1-212) 622-4668

karen.e.jay@jpmorgan.com

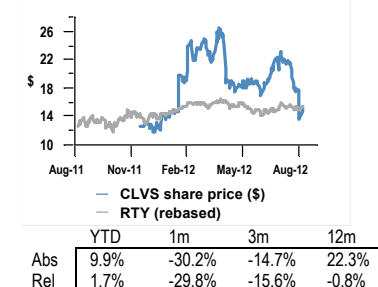
**Matthew J. Lowe, Ph.D.**

(1-212) 622-0848

matthew.j.lowe@jpmorgan.com

J.P. Morgan Securities LLC

#### Price Performance



**SMid Cap Research**  
THINK BIG, BUY SMALL

Company Data	
Price (\$)	15.36
Date Of Price	07 Aug 12
52-week Range (\$)	27.55 - 11.45
Mkt Cap (\$ mn)	395.43
Fiscal Year End	Dec
Shares O/S (mn)	26
Price Target (\$)	28.00
Price Target End Date	31 Dec 13

## Product Pipeline

Figure 1: CLVS Pipeline

Program	P/C	Ph1	Ph2	Ph3	FDA	Mkt.	Partner	Comments
<b>CO-101</b>								
1L met pancreatic cancer								Lipid conjugated gemcitabine, In-licensed from Clavis Pharma in Nov2009 LEAP: pivotal, randomized, controlled, 360 pt study - CO-101 vs. gemcit
2L met pancreatic cancer								Open-label, single arm. Enrollment began Feb 2011
Solid tumors								Ph1 ongoing in combination with cisplatin
<b>CO-1686</b>								
NSCLC								In-licensed from Avila Therapeutics in May 2010 Oral EGFR mutant-selective inhibitor
<b>CO-338</b>								
Solid tumors								In-licensed from Pfizer in June 2011 IV PARP inhibitor (Completed Ph 2 in combination with TMZ)
Solid tumors								Oral PARP inhibitor (Ongoing dose-ranging Ph1 study with chemo)

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

## Upcoming Events

Figure 2: CLVS Upcoming Events

Program	Event	Expected Timing	Significance
<b>CO-101</b>	Report top-line results (OS in low hENT1 pts)	4Q12	High
	Complete enrollment for Ph2 study in 2L panc cancer	4Q12	Low
	File NDA with FDA and MAA with EMA	mid-2013	Medium
	Potential FDA approval	1Q14	High
<b>CO-1686</b>	Initiate Ph1/2 study in Japan	3Q12	
	Data from Ph1/2 POC trial (T790M patients)	2H13	Medium-High
	Goal to file NDA within 4 years of IND filing	1Q16	Low-Medium
<b>CO-338</b>	Data from two Ph1 monotherapy (oral) trials in solid tumors	4Q12	Low

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

## Investment Thesis

We have an Overweight rating on CLVS shares. Our thesis is primarily based on the potential for CO-101, the company's lead asset for pancreatic cancer, to become standard of care in a subgroup (hENT1 low) of patients. Furthermore, this subgroup represents a significant proportion of all front-line pancreatic cancer patients (~65%). Our positive view of CO-101 is also driven by multiple upside drivers to our sales assumptions, one of which has already materialized (hENT1 low % confirmed to be 64% rather than 50%). Underpinning CO-101 is the rest of Clovis' early but interesting pipeline and a strong management team with an excellent track record of success. Additionally, a unique feature of all of the company's candidates is the development of companion diagnostics for patient selection, which could provide a regulatory and commercial benefit. The key event for 2012 is top-line results from the pivotal LEAP study in 4Qe.

## Valuation

We are establishing a December 2013 price target of \$28 (unchanged from our 2012 target) but our probability of approval and commercial scenarios remain conservatively skewed. Our target is based on a blended average of our proprietary probability-adjusted sum-of-the-parts scenario analysis (50% weighting) and risk-adjusted NPV model (50% weighting).

Table 1: CLVS Valuation Summary

CLVS : Valuation Summary			
Discount rate	20.0%		
<b>Main value driver</b>	Prob of approval	Peak sales est (avg. scenario)	Avg peak yr
CO-101, US	55%	\$ 600	2019
CO-101, EU	55%	\$ 300	2020
<b>Valuation methodology</b>	Value	Weighting	Adj. value/ share
P/E 2015	\$ -	0%	\$ -
Real options scenario analysis	\$ 24.88	50%	12.44
Risk adjusted NPV analysis	\$ 30.16	50%	15.08
Total			\$ 27.52
Catalyst/liquidity discount			0%
<b>YE 2013 Price Target</b>			<b>\$ 28</b>

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

### Proprietary real options scenario analysis (50% weighting)

Using this model, we estimate the value of the company's development programs (predominantly CO-101) by assigning a range of probabilities to six different commercial scenarios (ranging from an ineffective product that generates zero value to a breakthrough treatment option) and analyze them over several possible peak sales years. Discount rates in our universe are typically based on the company's weighted average cost of capital and generally fall within a range of 10% to 15%. We apply a rate of 20%, higher than our typical range, which we believe is appropriate for a new issue, though we expect the rate will track down.

### Value contribution of CO-101

Below, we demonstrate our analysis for CO-101 in the US and EU. As Clovis' key value driver, this product contributes \$17 to our SOTP analysis. We assume a 55%

probability that CO-101 reaches the market in each territory (slightly above historical success rates for clinical candidates in randomized Phase 2 trials in oncology given the support for the hENT1 thesis, the companion diagnostic, and early survival data). Our timeline to reach peak sales is 2019-2020, depending on the geographic location, which we acknowledge may be a bit too conservative. Typically, drugs for life threatening cancer conditions peak quickly (often within a few years for a given indication) as opposed to a more gradual ramp (as we are assuming). However, we await LEAP data prior to reconsidering our expectations. We also assume a 15% royalty paid to Clavis Pharma on CO-101 sales. As indicated, a discount rate of 20% is applied, which also may be conservative given the probability adjustments already in place.

#### **Risk-adjusted NPV analysis (50% weighting)**

In our risk-adjusted NPV analysis, we estimate the revenues and associated expenses (including taxes) over the expected patent life of a product. We complete this exercise for conservative, moderate, and aggressive sales scenarios and then assign a range of probabilities to each of these outcomes as well as to the possibility that the product is ineffective and generates zero value. For CO-101, we assume a formulation patent will be granted so that protection extends to 2030. As with our scenario analysis, we apply a discount rate of 20%, which we believe is appropriate given the applied probability adjustments. The key assumptions in our rNPV model are outlined below.

#### **P/E analysis (no weighting)**

We assign no weighting to our P/E analysis given that we project the first year of profitability to be 2015 and the variation in multiples in the first year of profitability is extremely broad.

### **Risks to Rating and Price Target**

Clovis is susceptible to the standard risks that apply to the entire biotechnology industry, including development, regulatory, commercial, manufacturing, financing and IP pitfalls. Other risks specific to the company are listed below.

#### **LEAP outcome in 2H12 is a highly binary event**

CO-101 is the main component of the company's valuation, and future performance is highly dependent on the outcome of the LEAP trial. This makes for a very binary story with significant downside risk if the trial fails.

#### **Limited proof-of-concept data**

Rationale for the pivotal LEAP trial is based on evidence from an abbreviated Phase 2 program. Moreover, dosing studies were not highly robust and the safety profile of CO-101 is relatively immature, in our view. Additionally, the hENT1 theory is based primarily on retrospective analyses and has not been definitively proven in a prospective clinical trial. Thus, until the more rigorous LEAP study proves otherwise, we believe CO-101's potential is more hypothesis based than data driven.

#### **Companion diagnostic adds an element of complexity to the regulatory process**

While we believe the hENT1 diagnostic will help drive rapid adoption and ultimately be an advantage, it also adds an element of risk. Approval of CO-101 is contingent on approval of the hENT1 test, which is currently in development and projected to be

filed along with the CO-101 drug application. Our understanding is that it is a very standard test, and we believe the approval process will also be relatively straightforward; however, we can't totally discount some unforeseen risk that could delay the approval of CO-101.

**Enough cash for now, but more capital needed for commercialization**

Management believes it has sufficient cash (~\$121M at 1Q12) to complete the clinical and regulatory development of CO-101 but will require additional funding to globally commercialize the drug. Seeing that management plans to market CO-101 in the US and EU, we assume an additional financing post LEAP data, albeit at a materially higher valuation (if the results are indeed positive).

Figure 3: CLVS Income Statement

Cory W. Kasimov  
cory.w.kasimov@jpmorgan.com  
212.622.5216

Fiscal Year Ends Dec 31	2009A	2010A	2011A	1Q12A	2Q12A	3Q12E	4Q12E	2012E	2013E	2014E	2015E	2016E
CO-101:												
CO-101 - US sales										\$ 106.5	\$ 275.5	\$ 513.3
CO-101 - EU sales										21.3	107.0	268.8
Total CO-101 sales										127.7	382.5	782.1
<b>Total Revenue</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 127.7</b>	<b>\$ 382.5</b>	<b>\$ 782.1</b>
COGS & royalties	-	-	-	-	-	-	-	-	-	37.0	107.1	211.2
R&D	1.762	22.3	40.7	12.6	12.590	13.6	14.5	53.2	58.9	77.9	95.0	125.1
Acquired in-process R&D	13.1	12.0	7.0	4.0	0.250	-	-	4.3	-	-	-	-
SG&A	2.2	4.3	6.9	2.4	2.680	3.2	3.3	11.6	23.1	54.2	82.3	108.8
<b>Total Operating Expenses</b>	<b>\$ 17.1</b>	<b>\$ 38.6</b>	<b>\$ 54.6</b>	<b>\$ 19.0</b>	<b>\$ 15.520</b>	<b>\$ 16.7</b>	<b>\$ 17.8</b>	<b>\$ 69.0</b>	<b>\$ 82.0</b>	<b>\$ 169.2</b>	<b>\$ 284.4</b>	<b>\$ 445.0</b>
Operating income	(17.1)	(38.6)	(54.6)	(19.0)	(15.5)	(16.7)	(17.8)	(69.0)	(82.0)	(41.4)	98.1	337.1
Other income, net	(0.04)	0.795	(0.96)	(0.004)	(0.172)	0.0	0.0	(0.1)	(0.2)	3.0	4.7	9.0
Pretax Income	(17.1)	(37.830)	(55.5)	(18.991)	(15.7)	(16.7)	(17.8)	(69.2)	(82.1)	(38.4)	102.8	346.1
Income Tax (benefit)	-	-	(0.027)	(0.0)	0.04	-	-	0.0	-	-	10.3	86.5
<b>Net Income</b>	<b>\$ (17.1)</b>	<b>\$ (38)</b>	<b>\$ (55.6)</b>	<b>\$ (18.999)</b>	<b>\$ (15.657)</b>	<b>\$ (16.7)</b>	<b>\$ (17.8)</b>	<b>\$ (69.2)</b>	<b>\$ (82.1)</b>	<b>\$ (38.4)</b>	<b>\$ 92.5</b>	<b>\$ 259.6</b>
Average shares Outstanding	3.2	3.8	3.9	22.041	25.7	25.9	26.0	24.9	34.0	36.0	38.0	40.0
<b>GAAP EPS</b>	<b>\$ (5.30)</b>	<b>\$ (9.85)</b>	<b>\$ (14.42)</b>	<b>\$ (0.86)</b>	<b>\$ (0.61)</b>	<b>\$ (0.65)</b>	<b>\$ (0.68)</b>	<b>\$ (2.77)</b>	<b>\$ (2.41)</b>	<b>\$ (1.07)</b>	<b>\$ 2.43</b>	<b>\$ 6.48</b>
<i>Margin Analysis:</i>												
Gross margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	71%	72%	73%
Operating margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	26%	43%
Net margin	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	24%	33%
<i>Cost Analysis:</i>												
COGS as % of tot. prod. sales				NM	NM	NM	NM	NM	NM	29%	28%	27%
R&D as % of tot. revenue				NM	NM	NM	NM	NM	NM	42%	22%	14%
SG&A as % of tot. revenue				NM	NM	NM	NM	NM	NM	61%	25%	16%
<i>Year-over-year growth:</i>												
Total revenue	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
R&D Expense		1167%	82%	78%	30%	17%	16%	31%	11%	32%	NM	NM
SG&A Expense		95%	59%	75%	59%	81%	64%	69%	99%	134%	NM	NM
Total operating expenses		126%	41%	125%	-15%	26%	23%	26%	19%	106%	NM	NM
Operating income	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
Net income	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
EPS	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	167%
<i>Tax Rate</i>	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	10%	25%

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

## Clovis Oncology: Summary of Financials

Income Statement - Annual	FY11A	FY12E	FY13E	FY14E	Income Statement - Quarterly	1Q12A	2Q12A	3Q12E	4Q12E
Revenues	0	0	0	128	Revenues	0A	0A	0	0
Cost of products sold	0	0	0	37	Cost of products sold	0A	0A	0	0
Gross profit	0	0	0	91	Gross profit	0A	0A	0	0
SG&A	7	12	23	54	SG&A	2A	3A	3	3
R&D	41	53	59	78	R&D	13A	13A	14	14
Operating Income	(55)	(69)	(82)	(41)	Operating income	(19)A	(16)A	(17)	(18)
Note: EBITDA	-	-	-	-	Note: EBITDA	-	-	-	-
Net interest income / (expense)	(1)	(0)	(0)	3	Net interest income / (expense)	(0)A	(0)A	0	0
Other income / (expense)	-	-	-	-	Other income / (expense)	-	-	-	-
Pretax income	-	-	-	-	Pretax income	-	-	-	-
Income taxes	(0)	0	0	0	Income taxes	(0)A	0A	0	0
Net income - GAAP	(56)	(69)	(82)	(38)	Net income - GAAP	(19)A	(16)A	(17)	(18)
Net income - recurring	-	-	-	-	Net income - recurring	-	-	-	-
Diluted shares outstanding	4	25	34	36	Diluted shares outstanding	22A	26A	26	26
EPS - excluding non-recurring	-	-	-	-	EPS - excluding non-recurring	-	-	-	-
EPS - recurring	(14.42)	(2.77)	(2.41)	(1.07)	EPS - recurring	(0.86)A	(0.61)A	(0.65)	(0.68)
Balance Sheet and Cash Flow Data	FY11A	FY12E	FY13E	FY14E	Ratio Analysis	FY11A	FY12E	FY13E	FY14E
Cash and cash equivalents	138	137	235	195	Sales growth	-	-	-	-
Accounts receivable	0	0	0	0	EBIT growth	-	-	-	-
Inventories	-	-	-	-	EPS growth	-	-	-	-
Other current assets	-	-	-	-					
Current assets	-	-	-	-	Gross margin	-	-	-	-
PP&E	2	1	1	3	EBIT margin	-	-	-	-
Total assets	143	142	240	201	EBITDA margin	-	-	-	-
					Tax rate	-	-	-	-
Total debt	-	-	-	-	Net margin	-	-	-	-
Total liabilities	12	9	9	9					
Shareholders' equity	132	133	231	193	Debt / EBITDA	-	-	-	-
					Debt / Capital (book)	-	-	-	-
Net income (including charges)	-	-	-	-	Return on assets (ROA)	-	-	-	-
D&A	-	-	-	-	Return on equity (ROE)	-	-	-	-
Change in working capital	-	-	-	-	Return on invested capital (ROIC)	-	-	-	-
Other	-	-	-	-					
Cash flow from operations	-	-	-	-	Enterprise value / sales	-	-	-	-
					Enterprise value / EBITDA	-	-	-	-
Capex	-	-	-	-	Free cash flow yield	-	-	-	-
Free cash flow	-	-	-	-					
Cash flow from investing activities	-	-	-	-					
Cash flow from financing activities	-	-	-	-					
Dividends	-	-	-	-					
Dividend yield	-	-	-	-					

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

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

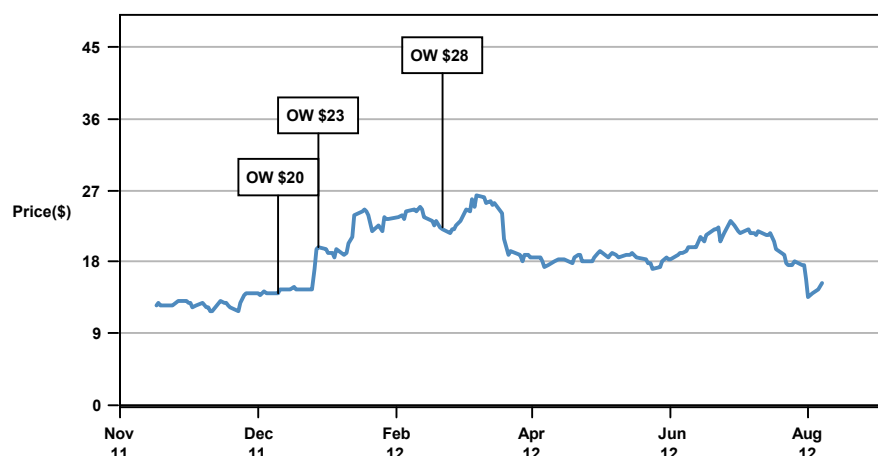
**Analyst Certification:** The research analyst(s) denoted by an “AC” on the cover of this report certifies (or, where multiple research analysts are primarily responsible for this report, the research analyst denoted by an “AC” on the cover or within the document individually certifies, with respect to each security or issuer that the research analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect his or her personal views about any and all of the subject securities or issuers; and (2) no part of any of the research analyst's compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report.

## Important Disclosures

- **Market Maker:** JPMS makes a market in the stock of Clovis Oncology.
- **Lead or Co-manager:** J.P. Morgan acted as lead or co-manager in a public offering of equity and/or debt securities for Clovis Oncology within the past 12 months.
- **Client:** J.P. Morgan currently has, or had within the past 12 months, the following company(ies) as clients: Clovis Oncology.
- **Client/Investment Banking:** J.P. Morgan currently has, or had within the past 12 months, the following company(ies) as investment banking clients: Clovis Oncology.
- **Client/Non-Investment Banking, Securities-Related:** J.P. Morgan currently has, or had within the past 12 months, the following company(ies) as clients, and the services provided were non-investment-banking, securities-related: Clovis Oncology.
- **Client/Non-Securities-Related:** J.P. Morgan currently has, or had within the past 12 months, the following company(ies) as clients, and the services provided were non-securities-related: Clovis Oncology.
- **Investment Banking (past 12 months):** J.P. Morgan received in the past 12 months compensation for investment banking Clovis Oncology.
- **Investment Banking (next 3 months):** J.P. Morgan expects to receive, or intends to seek, compensation for investment banking services in the next three months from Clovis Oncology.
- **Non-Investment Banking Compensation:** J.P. Morgan has received compensation in the past 12 months for products or services other than investment banking from Clovis Oncology.

**Company-Specific Disclosures:** Important disclosures, including price charts, are available for compendium reports and all J.P. Morgan-covered companies by visiting <https://mm.jpmorgan.com/disclosures/company>, calling 1-800-477-0406, or emailing [research.disclosure.inquiries@jpmorgan.com](mailto:research.disclosure.inquiries@jpmorgan.com) with your request.

Clovis Oncology (CLVS, CLVS US) Price Chart



Source: Bloomberg and J.P. Morgan; price data adjusted for stock splits and dividends.  
Initiated coverage Jan 03, 2012.

The chart(s) show J.P. Morgan's continuing coverage of the stocks; the current analysts may or may not have covered it over the entire period.

J.P. Morgan ratings: OW = Overweight, N= Neutral, UW = Underweight



### Explanation of Equity Research Ratings and Analyst(s) Coverage Universe:

J.P. Morgan uses the following rating system: Overweight [Over the next six to twelve months, we expect this stock will outperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Neutral [Over the next six to twelve months, we expect this stock will perform in line with the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] Underweight [Over the next six to twelve months, we expect this stock will underperform the average total return of the stocks in the analyst's (or the analyst's team's) coverage universe.] In our Asia (ex-Australia) and UK small- and mid-cap equity research, each stock's expected total return is compared to the expected total return of a benchmark country market index, not to those analysts' coverage universe. If it does not appear in the Important Disclosures section of this report, the certifying analyst's coverage universe can be found on J.P. Morgan's research website, [www.morganmarkets.com](http://www.morganmarkets.com).

**Coverage Universe: Kasimov, Cory W:** Alkermes, Inc. (ALKS), Amylin Pharmaceuticals (AMLN), Arena Pharmaceuticals, Inc. (ARNA), Ariad Pharmaceuticals (ARIA), Array BioPharma (ARRY), BioMarin Pharmaceuticals (BMRN), Clovis Oncology (CLVS), Dendreon (DNDN), Emergent BioSolutions (EBS), Exelixis, Inc (EXEL), Geron Corp (GERN), ImmunoGen (IMGN), Incyte Corporation (INCY), Lexicon Pharmaceuticals (LXRX), MannKind Corporation (MNKD), Nektar Therapeutics (NKTR), Onyx Pharmaceuticals (ONXX), Orexigen Therapeutics (OREX), Rigel Pharmaceuticals (RIGL), Savient Pharmaceuticals (SVNT), Seattle Genetics (SGEN), The Medicines Company (MDCO), VIVUS, Inc (VVUS), ZIOPHARM Oncology (ZIOP)

### J.P. Morgan Equity Research Ratings Distribution, as of July 6, 2012

	Overweight (buy)	Neutral (hold)	Underweight (sell)
J.P. Morgan Global Equity Research Coverage	45%	43%	11%
IB clients*	51%	47%	34%
JPMS Equity Research Coverage	44%	48%	8%
IB clients*	70%	62%	51%

\*Percentage of investment banking clients in each rating category.

For purposes only of FINRA/NYSE ratings distribution rules, our Overweight rating falls into a buy rating category; our Neutral rating falls into a hold rating category; and our Underweight rating falls into a sell rating category.

**Equity Valuation and Risks:** For valuation methodology and risks associated with covered companies or price targets for covered companies, please see the most recent company-specific research report at <http://www.morganmarkets.com>, contact the primary analyst or your J.P. Morgan representative, or email [research.disclosure.inquiries@jpmorgan.com](mailto:research.disclosure.inquiries@jpmorgan.com).

**Equity Analysts' Compensation:** The equity research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

### Other Disclosures

J.P. Morgan ("JPM") is the global brand name for J.P. Morgan Securities LLC ("JPMS") and its affiliates worldwide. J.P. Morgan Cazenove is a marketing name for the U.K. investment banking businesses and EMEA cash equities and equity research businesses of JPMorgan Chase & Co. and its subsidiaries.

**Options related research:** If the information contained herein regards options related research, such information is available only to persons who have received the proper option risk disclosure documents. For a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options, please contact your J.P. Morgan Representative or visit the OCC's website at <http://www.optionsclearing.com/publications/risks/riskstoc.pdf>

### Legal Entities Disclosures

**U.S.:** JPMS is a member of NYSE, FINRA, SIPC and the NFA. JPMorgan Chase Bank, N.A. is a member of FDIC and is authorized and regulated in the UK by the Financial Services Authority. **U.K.:** J.P. Morgan Securities plc (JPMS plc) is a member of the London Stock Exchange and is authorized and regulated by the Financial Services Authority. Registered in England & Wales No. 2711006. Registered Office 25 Bank Street, London, E14 5JP. **South Africa:** J.P. Morgan Equities Limited is a member of the Johannesburg Securities Exchange and is regulated by the FSB. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong. **Korea:** J.P. Morgan Securities (Far East) Ltd, Seoul Branch, is regulated by the Korea Financial Supervisory Service. **Australia:** J.P. Morgan Australia Limited (ABN 52 002 888 011/AFS Licence No: 238188) is regulated by ASIC and J.P. Morgan Securities Australia Limited (ABN 61 003 245 234/AFS Licence No: 238066) is a Market Participant with the ASX and regulated by ASIC. **Taiwan:** J.P. Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. **India:** J.P. Morgan India Private Limited, having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz East, Mumbai - 400098, is a member of the National Stock Exchange of India Limited (SEBI Registration Number - INB 230675231/INF 230675231/INE 230675231) and Bombay Stock Exchange Limited (SEBI Registration Number - INB 010675237/INF 010675237) and is regulated by Securities and Exchange Board of India. **Thailand:** JPMorgan Securities (Thailand) Limited is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission. **Indonesia:** PT J.P. Morgan Securities Indonesia is a member of the Indonesia Stock Exchange and is regulated by the BAPEPAM LK. **Philippines:** J.P. Morgan Securities Philippines Inc. is a member of the Philippine Stock Exchange and is regulated by the Securities and Exchange Commission. **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissao de Valores Mobiliarios (CVM) and by the Central Bank of Brazil. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V., J.P. Morgan Grupo Financiero is a member of the Mexican Stock Exchange and authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **Singapore:** This material is issued and distributed in Singapore by J.P. Morgan Securities Singapore Private Limited (JPMSS) [MICA (P) 088/04/2012 and Co. Reg. No.: 199405335R] which is a member of the Singapore Exchange Securities

Trading Limited and is regulated by the Monetary Authority of Singapore (MAS) and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore) which is regulated by the MAS. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X) which is a Participating Organization of Bursa Malaysia Berhad and a holder of Capital Markets Services License issued by the Securities Commission in Malaysia. **Pakistan:** J. P. Morgan Pakistan Broking (Pvt.) Ltd is a member of the Karachi Stock Exchange and regulated by the Securities and Exchange Commission of Pakistan. **Saudi Arabia:** J.P. Morgan Saudi Arabia Ltd. is authorized by the Capital Market Authority of the Kingdom of Saudi Arabia (CMA) to carry out dealing as an agent, arranging, advising and custody, with respect to securities business under licence number 35-07079 and its registered address is at 8th Floor, Al-Faisaliyah Tower, King Fahad Road, P.O. Box 51907, Riyadh 11553, Kingdom of Saudi Arabia. **Dubai:** JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - Building 3, Level 7, PO Box 506551, Dubai, UAE.

#### Country and Region Specific Disclosures

**U.K. and European Economic Area (EEA):** Unless specified to the contrary, issued and approved for distribution in the U.K. and the EEA by JPMS plc. Investment research issued by JPMS plc has been prepared in accordance with JPMS plc's policies for managing conflicts of interest arising as a result of publication and distribution of investment research. Many European regulators require a firm to establish, implement and maintain such a policy. This report has been issued in the U.K. only to persons of a kind described in Article 19 (5), 38, 47 and 49 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (all such persons being referred to as "relevant persons"). This document must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this document relates is only available to relevant persons and will be engaged in only with relevant persons. In other EEA countries, the report has been issued to persons regarded as professional investors (or equivalent) in their home jurisdiction. **Australia:** This material is issued and distributed by JPMSAL in Australia to "wholesale clients" only. JPMSAL does not issue or distribute this material to "retail clients". The recipient of this material must not distribute it to any third party or outside Australia without the prior written consent of JPMSAL. For the purposes of this paragraph the terms "wholesale client" and "retail client" have the meanings given to them in section 761G of the Corporations Act 2001. **Germany:** This material is distributed in Germany by J.P. Morgan Securities plc, Frankfurt Branch and J.P.Morgan Chase Bank, N.A., Frankfurt Branch which are regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht. **Hong Kong:** The 1% ownership disclosure as of the previous month end satisfies the requirements under Paragraph 16.5(a) of the Hong Kong Code of Conduct for Persons Licensed by or Registered with the Securities and Futures Commission. (For research published within the first ten days of the month, the disclosure may be based on the month end data from two months prior.) J.P. Morgan Broking (Hong Kong) Limited is the liquidity provider/market maker for derivative warrants, callable bull bear contracts and stock options listed on the Stock Exchange of Hong Kong Limited. An updated list can be found on HKEx website: <http://www.hkex.com.hk>. **Japan:** There is a risk that a loss may occur due to a change in the price of the shares in the case of share trading, and that a loss may occur due to the exchange rate in the case of foreign share trading. In the case of share trading, JPMorgan Securities Japan Co., Ltd., will be receiving a brokerage fee and consumption tax (shouhizei) calculated by multiplying the executed price by the commission rate which was individually agreed between JPMorgan Securities Japan Co., Ltd., and the customer in advance. Financial Instruments Firms: JPMorgan Securities Japan Co., Ltd., Kanto Local Finance Bureau (kinsho) No. 82 Participating Association / Japan Securities Dealers Association, The Financial Futures Association of Japan, Type II Financial Instruments Firms Association and Japan Investment Advisers Association. **Korea:** This report may have been edited or contributed to from time to time by affiliates of J.P. Morgan Securities (Far East) Ltd, Seoul Branch. **Singapore:** JPMS and/or its affiliates may have a holding in any of the securities discussed in this report; for securities where the holding is 1% or greater, the specific holding is disclosed in the Important Disclosures section above. **India:** For private circulation only, not for sale. **Pakistan:** For private circulation only, not for sale. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to persons whose principal business is the investment of money or who, in the course of and for the purposes of their business, habitually invest money. JPMSAL does not issue or distribute this material to members of "the public" as determined in accordance with section 3 of the Securities Act 1978. The recipient of this material must not distribute it to any third party or outside New Zealand without the prior written consent of JPMSAL. **Canada:** The information contained herein is not, and under no circumstances is to be construed as, a prospectus, an advertisement, a public offering, an offer to sell securities described herein, or solicitation of an offer to buy securities described herein, in Canada or any province or territory thereof. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the dealer registration requirement in the relevant province or territory of Canada in which such offer or sale is made. The information contained herein is under no circumstances to be construed as investment advice in any province or territory of Canada and is not tailored to the needs of the recipient. To the extent that the information contained herein references securities of an issuer incorporated, formed or created under the laws of Canada or a province or territory of Canada, any trades in such securities must be conducted through a dealer registered in Canada. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed judgment upon these materials, the information contained herein or the merits of the securities described herein, and any representation to the contrary is an offence. **Dubai:** This report has been issued to persons regarded as professional clients as defined under the DFSA rules.

**General:** Additional information is available upon request. Information has been obtained from sources believed to be reliable but JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) do not warrant its completeness or accuracy except with respect to any disclosures relative to JPMS and/or its affiliates and the analyst's involvement with the issuer that is the subject of the research. All pricing is as of the close of market for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. The recipient of this report must make its own independent decisions regarding any securities or financial instruments mentioned herein. JPMS distributes in the U.S. research published by non-U.S. affiliates and accepts responsibility for its contents. Periodic updates may be provided on companies/industries based on company specific developments or announcements, market conditions or any other publicly available information. Clients should contact analysts and execute transactions through a J.P. Morgan subsidiary or affiliate in their home jurisdiction unless governing law permits otherwise.

"Other Disclosures" last revised August 04, 2012.

**Copyright 2012 JPMorgan Chase & Co. All rights reserved. This report or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan.**

Cory Kasimov  
(1-212) 622-5266  
cory.w.kasimov@jpmorgan.com

North America Equity Research  
08 August 2012

J.P.Morgan