

Celladon Corp.

Servier Agreement a Plus

What's New? Celladon just announced an option agreement with Servier for the development of SERCA2b modulators for the treatment of type 2 diabetes and other metabolic diseases in international markets. We view Servier as an appropriate partner for Celladon given its focus on the heart failure and metabolic markets and its international reach. This agreement will provide Celladon with a development partner, geographic reach, as well as additional funding for the development of its pipeline.

Terms of the agreement: Per the agreement, Servier has the option to license ex-US rights to Celladon's small molecule platform following results from in-vitro and in-vivo studies. Celladon will retain all products rights in the U.S. If Servier decides to exercise its option, Celladon would receive an upfront payment as well as research and milestone payments and royalties on future ex-US sales. The two companies will work together in the discovery phase and if development efforts continue, Servier will be responsible for all costs associated with development, regulatory, and commercialization efforts in its ex-US territories. Celladon will then have the option to develop the compound in the U.S. if clinical data generated by Servier is favorable.

Enrollment for leading product candidate Mydicar expected to complete this month: Celladon's lead pipeline product, Mydicar, is a gene therapy in development for the treatment of chronic heart failure. Phase 1/2a results demonstrated a signal to reduce the number of clinical events and heart-failure related hospitalizations. The product is currently in phase 2b trial and enrollment is expected to complete by the end of February. Trial results are expected in April 2015.

Reiterate OW rating and \$15 price target. We believe Celladon offers investors a favorable risk/reward profile. While there are considerable risks to the development of a gene therapy, we believe it will also offer investors significant room for upside if successfully developed. We also believe Mydicar has a lower risk profile on a relative basis given its delivery mechanism, AAV vectors, are accepted by the EMA and the FDA.

CLDN: Quarterly and Annual EPS (USD)

	2012	2013			2014			Change y/y	
FY Dec	Actual	Old	New	Cons	Old	New	Cons	2013	2014
Q1	N/A	N/A	N/A	N/A	-0.36E	-0.36E	N/A	N/A	N/A
Q2	N/A	N/A	N/A	N/A	-0.36E	-0.36E	N/A	N/A	N/A
Q3	N/A	N/A	N/A	N/A	-0.36E	-0.36E	N/A	N/A	N/A
Q4	N/A	N/A	N/A	N/A	-0.36E	-0.36E	N/A	N/A	N/A
Year	N/A	-5.32E	-5.32E	N/A	-1.43E	-1.43E	N/A	N/A	73%
P/E	N/A		N/A			N/A			

Source: Barclays Research.

Consensus numbers are from Thomson Reuters

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Equity Research

OVERWEIGHT

Healthcare | U.S. Biotechnology 24 February 2014

	Unchanged
Industry View	NEUTRAL
	Unchanged
Price Target	USD 15.00
	Unchanged
Price (21-Feb-2014)	USD 7.57
Potential Upside/Downside	+98%
Tickers	CLDN
Market Cap (USD mn)	134
Shares Outstanding (mn)	17.68
Free Float (%)	57.96
52 Wk Avg Daily Volume (mn)	0.2
Dividend Yield (%)	N/A
Return on Equity TTM (%)	N/A
Current BVPS (USD)	-2.59
Source: Thomson Reuters	

Stock Rating



Link to Barclays Live for interactive charting

U.S. Biotechnology

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U.S. Biotechnology							Industry View: NEUTRAL
Celladon Corp. (CLDN) Stock Rating: OVERWEIGHT							
Income statement (\$k)	2012A	2013E	2014E	2015E	CAGR	Price (21-Feb-2014)	USD 7.57
Revenue	N/A	0	0	0	N/A	Price Target	USD 15.00
EBITDA (adj)	-15,881	-20,138	-25,006	-18,519	N/A		
EBIT (adj)	N/A	-20,130	-25,000	-20,536	N/A	Why Overweight? We view Celladon as having a favorable risk/reward profile for investors. The	
Pre-tax income (adj)	N/A	-49,994	-24,816	-20,140	N/A	company is developing a gene therapy, Mydicar, to	
Net income (adj)	N/A	-63,971	-24,816	-20,140	N/A	treat chronic heart failure. While there are	
EPS (adj) (\$)	N/A	-5.32	-1.43	-0.95	N/A	considerable risks associated gene therapy, we also	
Diluted shares (k)	N/A	12,035.4	17,304.3	21,161.7	N/A	view the market opportunity as significant if the	
DPS	N/A	N/A	N/A	N/A	N/A	company is successfully develop the product.	
DF3	IN/ A	IN/ A	IN/ A	IN/ A	IN/ A		
Margin and return data					Average	Upside case	USD 42.00
EBITDA (adj) margin (%)	N/A	N/A	N/A	N/A	N/A	 We see significant unside notential for (elladon 	
EBIT (adj) margin (%)	N/A	N/A	N/A	N/A	N/A		e, we see valuation
Pre-tax (adj) margin (%)	N/A	N/A	N/A	N/A	N/A	increasing to \$42/share.	
Net (adj) margin (%)	N/A	N/A	N/A	N/A	N/A	Daymaida as	LICD 2 00
ROIC (%)	-55.3	-300.5	-63.3	-22.1	-110.3	Downside case	USD 2.00
ROA (%)	-44.4	-82.1	-54.1	-21.1	-50.4	We see downside risks at ap	
ROE (%)	-55.3	-300.5	-63.3	-22.1	-110.3	Mydicar gene therapy does	
1.02 (70)	33.3	300.3	03.3		110.5	assumes some value attribu small molecule platform and	
Balance sheet and cash flow	(\$k)				CAGR	Small molecule platform and	a some casm
Tangible fixed assets	122	85	5,043	11,026	348.8%	Upside/Downside scenario	os .
Intangible fixed assets	N/A	N/A	N/A	N/A	N/A		
Cash and equivalents	32,649	23,213	39,636	84,570	37.3%	Price History Prior 12 months	Price Target Next 12 months
Total assets	35,929	24,588	46,286	97,113	39.3%	High	Upside
Short and long-term debt	0	0	0	0	N/A		42.00
Other long-term liabilities	N/A	N/A	N/A	N/A	N/A		12.00
Total liabilities	4,842	40	40	40	-79.8%		
Net debt/(funds)	-13,841	-9,955	-26,378	-71,312	N/A		
Shareholders' equity	29,309	21,287	39,232	91,323	46.1%		
Change in working capital	45,994	-11,024	12,988	46,108	0.1%	10.15	Target 15.00
Cash flow from operations	-14,637	-11,377	-20,153	-17,992	N/A	Current	15.00
Capital expenditure	-48	-12	-5,000	-8,000	N/A	7.45 /.5/	2.00
Free cash flow	12,114	5,235	-20,153	-17,992	N/A		2.00
						Low	Downside
Valuation and leverage metric	cs				Average	2011	Bownside
P/E (adj) (x)	N/A	N/A	N/A	N/A	N/A		
EV/EBITDA (adj) (x)	-4.9	-4.0	-2.6	-1.1	-3.1		
Equity FCF yield (%)	N/A	N/A	N/A	N/A	N/A		
EV/sales (x)	N/A	N/A	N/A	N/A	N/A		
P/BV (x)	N/A	N/A	N/A	N/A	N/A		
Dividend yield (%)	N/A	N/A	N/A	N/A	N/A		
Total debt/capital (%)	-89.5	-87.8	-205.2	-356.4	-184.7		
Selected operating metrics					Average		
SG&A/sales (%)	N/A	N/A	N/A	N/A	N/A		
R&D/sales (%)	N/A	N/A	N/A	N/A	N/A		
R&D growth (%)	N/A N/A	25.5	20.0	-25.0	6.8		
SG&A growth (%)	N/A N/A	32.3	43.7	10.0	28.6		
334/ (growth (/0)	IN/ A	32.3	тэ./	10.0	20.0		

Source: Company data, Barclays Research Note: FY End Dec

24 February 2014

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Primary Stocks (Ticker, Date, Price)

Celladon Corp. (CLDN, 21-Feb-2014, USD 7.57), Overweight/Neutral, A/C/D/J/K/L/M

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U.S. Biotechnology

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Biogen Idec (BIIB) BioMarin Pharmaceutical (BMRN) Celgene Corp. (CELG)

Celladon Corp. (CLDN) Dendreon Corp. (DNDN) Fibrocell Science Inc. (FCSC)

Gilead Sciences (GILD) GlycoMimetics Inc. (GLYC) Halozyme Therapeutics Inc. (HALO)

Idenix Pharmaceuticals (IDIX)Incyte Corp. (INCY)Intrexon Corp. (XON)Medivation Inc. (MDVN)Regeneron Pharmaceuticals (REGN)Tetraphase (TTPH)

Vertex Pharmaceuticals (VRTX)

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IMPORTANT DISCLOSURES CONTINUED

Celladon Corp. (CLDN)

USD 7.57 (21-Feb-2014)

Stock Rating

Industry View

OVERWEIGHT NEUTRAL



Currency=USD

Date **Closing Price** Rating **Adjusted Price Target**

Source: Thomson Reuters, Barclays Research

Historical stock prices and price targets may have been adjusted for stock splits and dividends.

Source: IDC, Barclays Research

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Valuation Methodology: Our price target is based on a probability-adjusted NPV analysis. We have only included the systolic heart failure indication in our model which contributes ~\$12/share. Including cash of ~\$3/share, we arrive at our price target of \$15.

Risks which May Impede the Achievement of the Barclays Research Price Target: Downside risks include failure of CUPID-2 trial, need for phase 3 trial, and inability to receive FDA approval for Mydicar.

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