

Celladon Corp. (CLDN)

Q1:14 Earnings, Priming the Pipeline in 2014, Reiterate OUTPERFORM

- Celladon reported a Q1 net loss of \$7.2M and \$57.6M in cash and equivalents, which included \$44.3M in net proceeds from its February IPO. We forecast the cash runway to last through the readout of the Phase IIb CUPID2 trial in April 2015.
- As revealed during their Investor and Analyst Day last week, the company intends to explore the use of MYDICAR gene therapy following plasmapheresis in heart failure patients who have neutralizing antibodies (nAbs) to the AAV1 vector. At the event, we learned of a pilot study in three nAb-positive patients where plasmapheresis was found to reduce nAb levels, including a marked reduction in one patient that would make them eligible for MYDICAR therapy. A formal study of MYDICAR in nAb-positive heart failure patients is planned to start in late 2014/early 2015. MYDICAR is also set to be evaluated for vascular disorders, including pulmonary arterial hypertension and AV-fistula maturation failure in end-stage renal disease.
- Separately, Servier is expected to decide by early 2015 on whether to exercise its option to license international rights for CLDN's small molecule SERCA2b program in diabetes and other metabolic disorders. Servier is expected to make its decision after the parties complete *in vitro* and *in vivo* studies. CLDN is also conducting preclinical studies of their SERCA2b modulators for neurodegenerative disorders.
- The main catalyst for CLDN remains data from the potentially pivotal Phase IIb CUPID2 trial, which has enrolled 250 patients with advanced systolic heart failure. Data is set to be unblinded after at least 186 cardiovascular events have been observed, which management reconfirmed is on track to occur in April 2015.
- Reiterate OUTPERFORM rating and \$17 price target. Our price target of \$17 is derived from applying a 6 multiple to estimated 2020 sales in new heart failure patients, discounted by 35% annually, supplemented by the present value of sales in existing heart failure patients (also discounted by 35% annually).
- Risks to the achievement of our price target include clinical failure of MYDICAR, failure to achieve regulatory approval and failure to achieve sales and earnings estimates.

FYE Dec	2013A	2014E			2015E		
REV	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.
Q1 Mar	--	0.0A		\$0.0A	0.0E		\$0.0E
Q2 Jun	0.0A	0.0E		0.0E	0.0E		0.0E
Q3 Sep	0.0A	0.0E		0.0E	0.0E		0.0E
Q4 Dec	0.0A	0.0E		0.0E	0.0E		0.0E
Year*	0.0A	0.0E		\$0.0E	0.0E		\$0.0E
Change	--	--			--		
EPS	2013A	2014E			2015E		
	ACTUAL	CURR.	PREV.	CONS.	CURR.	PREV.	CONS.
Q1 Mar	--	(\$0.60)A	(\$0.61)A	(\$0.60)A	(\$0.42)E	(\$0.62)E	(\$0.62)E
Q2 Jun	--	(\$0.38)E	(\$0.56)E	(\$0.48)E	(\$0.34)E	(\$0.50)E	(\$0.50)E
Q3 Sep	(\$0.45)A	(\$0.40)E	(\$0.58)E	(\$0.50)E	(\$0.32)E	(\$0.48)E	(\$0.48)E
Q4 Dec	(\$0.51)A	(\$0.41)E	(\$0.60)E	(\$0.50)E	(\$0.30)E	(\$0.45)E	(\$0.48)E
Year*	(\$1.67)A	(\$1.79)E	(\$2.35)E	(\$2.12)E	(\$1.38)E	(\$2.05)E	(\$1.82)E
P/E	--	--			--		
Change	--	-7%			23%		

Consensus estimates are from Thomson First Call.

* Numbers may not add up due to rounding.

May 14, 2014

Price
\$10.12

Rating
OUTPERFORM

12-Month Price Target
\$17

David M. Nierengarten, Ph.D.
(415) 274-6862
david.nierengarten@wedbush.com

Christopher N. Marai, Ph.D.
(415) 274-6861
christopher.marai@wedbush.com

Dilip Joseph
(415) 273-7308
dilip.joseph@wedbush.com

Company Information

Shares Outst (M)	18.5
Market Cap (M)	\$187.2
52-Wk Range	\$7.45 - \$17.16
Book Value/sh	\$0.82
Cash/sh	\$3.12
Enterprise Value (M)	\$129.6
LT Debt/Cap %	0%
Cash Burn (M)	\$34.6

Company Description

Celladon Corp. is based in San Diego, Ca. and is focused on the development of MYDICAR, a gene therapy product for increasing SERCA2a expression, currently in the Phase IIb CUPID 2 trial in advanced systolic heart failure.



Source: Thomson Reuters

Wedbush Securities does and seeks to do business with companies covered in its research reports. Thus, 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. Please see page 3 of this report for analyst certification and important disclosure information.

Investment Summary

Celladon Corporation (CLDN) is a biotechnology company focused on the development of MYDICAR for cardiovascular diseases characterized by deficiencies in the SERCA enzyme. Its lead clinical program is MYDICAR, a gene therapy designed to restore normal levels of the SERCA enzyme, in the Phase IIb CUPID 2 trial for the treatment of advanced systolic heart failure. MYDICAR could also be efficacious in treating other serious cardiovascular diseases, including diastolic heart failure, advanced heart failure in patients on an LVAD, pulmonary arterial hypertension, and AV-fistula maturation failure. CLDN also has small molecule SERCA modulators in preclinical development for diabetes and neurodegenerative conditions. The EMA has indicated that CUPID 2 could serve as the basis for an MAA application, and there is a possibility that the ongoing Phase IIb study could be sufficient for early approval in the US.

5/14/2014

Ticker: (CLDN:Nasdaq)

Celladon Corporation

Wedbush PacGrow Life Sciences

David M. Nierengarten, Ph.D.

415-274-6862

	2012A	2013A	Q1	Q2	Q3	Q4	2014E	2015E	2016E	2017E	2018E	2019E	2020E
Revenues:													
US Product Sales	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$111,108	\$411,839
ex-US Product Sales	\$0	0	\$0	\$0	\$0	\$0	0	0	0	0	56,463	231,272	388,676
Grant Revenue	\$0	0	\$0	\$0	\$0	\$0	0	0	0	0	0	0	0
Total Revenues	0	0	0	0	0	0	0	0	0	0	56,463	342,380	800,515
Cost and Expenses:													
Cost of Sales	0	0	0	0	0	0	0	0	0	0	0	11,111	41,184
R&D	13,314	16,927	5,218	5,740	6,027	6,147	23,132	25,844	30,114	34,003	36,805	39,839	43,123
SG&A	2,631	3,037	1,706	1,740	1,775	1,810	7,031	7,554	7,880	8,406	16,519	38,826	114,149
Total Operating Expenses	15,945	19,964	6,924	7,480	7,802	7,958	30,163	33,398	37,994	42,408	53,324	89,776	198,456
Operating Income (Loss)	(15,945)	(19,964)	(6,924)	(7,480)	(7,802)	(7,958)	(30,163)	(33,398)	(37,994)	(42,408)	3,138	252,604	602,058
Net Interest Income (Expense)	(73)	58	(51)	475	402	343	1,169	2,058	3,376	3,886	3,004	5,402	15,836
Other non-operating Income (Expense)	147	0	(187)	0	0	0	0	0	0	0	0	0	0
Income Before Income Taxes	(15,871)	(19,906)	(7,162)	(7,005)	(7,399)	(7,615)	(28,995)	(31,340)	(34,618)	(38,523)	6,143	258,006	617,894
Provision for Income Taxes	0	0	0	0	0	0	0	0	0	0	505	8,720	194,155
Net Income (Loss)	(15,871)	(19,906)	(7,162)	(7,005)	(7,399)	(7,615)	(28,995)	(31,340)	(34,618)	(38,523)	5,637	249,286	423,739
GAAP EPS	(1.58)	(1.67)	(0.60)	(0.38)	(0.40)	(0.41)	(1.79)	(1.38)	(1.19)	(1.20)	0.17	7.58	12.88
Total Shares Outstanding	10,262	12,035	18,500	18,525	18,550	18,575	18,575	26,150	30,225	32,825	32,900	32,900	32,900
Cash Burn	-	(15,074)	(9,927)	(9,313)	(7,614)	(7,795)	(34,649)	(33,132)	(37,616)	(42,045)	4,035	237,209	561,212
Cash Balance	32,649	18,370	57,629	48,836	41,579	34,172	34,172	82,953	112,678	109,826	103,360	336,897	718,850

Analyst Biography

David Nierengarten, Ph.D.

David is an Analyst covering stocks in the Biotechnology/Biopharmaceuticals/BioDefense sector. His prior sell-side research experience at Robert W. Baird & Co. covered biotechnology companies of all market capitalizations, with a focus on oncology and rare diseases.

David received his B.S. (Biochemistry) from the University of Wisconsin-Madison and Ph.D. (Molecular and Cell Biology) from the University of California-Berkeley.

David's Edge: David's early stage venture capital investing experience gives him a balanced perspective on developmental-stage biotechnology companies and their ultimate risk/reward potential. His experience on the other side of that equation in a clinical-stage, venture backed biotechnology company provides him with insights into corporate operations. The combination of experiences creates a focus on value creation in this event-driven space.

Analyst Certification

I, David M. Nierengarten, Ph.D., Christopher N. Marai, Ph.D., Dilip Joseph, certify that the views expressed in this report accurately reflect my personal opinion and that I have not and will not, directly or indirectly, receive compensation or other payments in connection with my specific recommendations or views contained in this report.

Disclosure information regarding historical ratings and price targets is available at <http://www.wedbush.com/ResearchDisclosure/DisclosureQ114.pdf>

Investment Rating System:

Outperform: Expect the total return of the stock to outperform relative to the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

Neutral: Expect the total return of the stock to perform in-line with the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

Underperform: Expect the total return of the stock to underperform relative to the median total return of the analyst's (or the analyst's team) coverage universe over the next 6-12 months.

The Investment Ratings are based on the expected performance of a stock (based on anticipated total return to price target) relative to the other stocks in the analyst's coverage universe (or the analyst's team coverage).*

Rating Distribution (as of March 31, 2014)	Investment Banking Relationships (as of March 31, 2014)
Outperform: 54%	Outperform: 22%
Neutral: 43%	Neutral: 2%
Underperform: 3%	Underperform: 0%

The Distribution of Ratings is required by FINRA rules; however, WS' stock ratings of Outperform, Neutral, and Underperform most closely conform to Buy, Hold, and Sell, respectively. Please note, however, the definitions are not the same as WS' stock ratings are on a relative basis.

The analysts responsible for preparing research reports do not receive compensation based on specific investment banking activity. The analysts receive compensation that is based upon various factors including WS' total revenues, a portion of which are generated by WS' investment banking activities.

Wedbush Equity Research Disclosures as of May 14, 2014

Company	Disclosure
Celladon Corp.	1,3,5,7

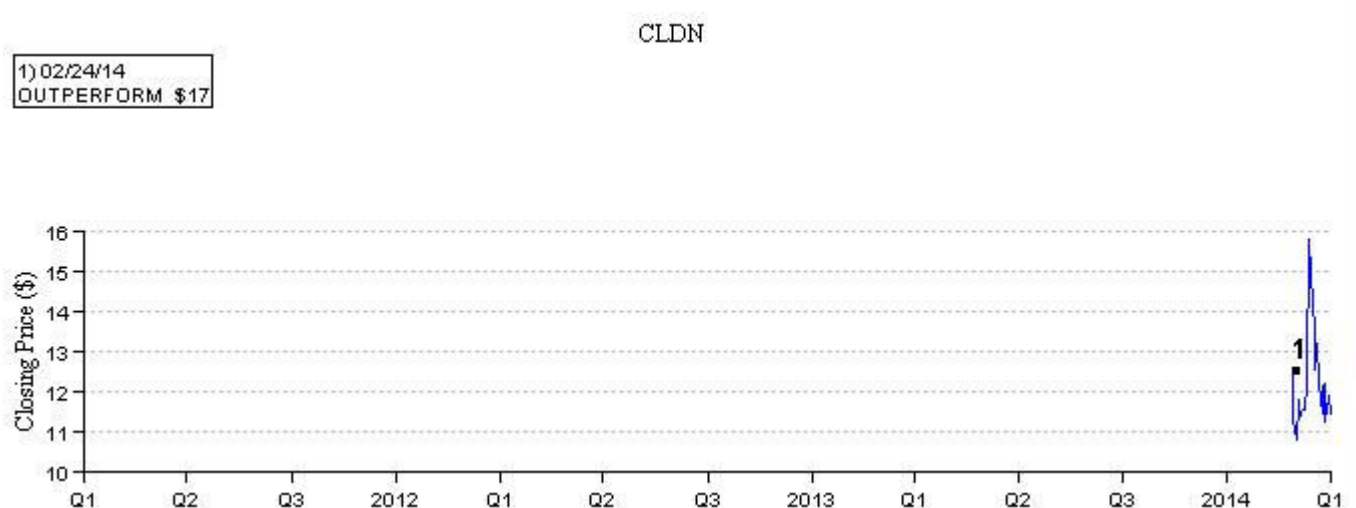
Research Disclosure Legend

1. WS makes a market in the securities of the subject company.
2. WS managed a public offering of securities within the last 12 months.
3. WS co-managed a public offering of securities within the last 12 months.
4. WS has received compensation for investment banking services within the last 12 months.
5. WS provided investment banking services within the last 12 months.
6. WS is acting as financial advisor.
7. WS expects to receive compensation for investment banking services within the next 3 months.
8. WS provided non-investment banking securities-related services within the past 12 months.
9. WS has received compensation for products and services other than investment banking services within the past 12 months.

10. The research analyst, a member of the research analyst's household, any associate of the research analyst, or any individual directly involved in the preparation of this report has a long position in the common stocks.
11. WS or one of its affiliates beneficially own 1% or more of the common equity securities.
12. The analyst maintains Contingent Value Rights that enables him/her to receive payments of cash upon the company's meeting certain clinical and regulatory milestones.

Price Charts

Wedbush disclosure price charts are updated within the first fifteen days of each new calendar quarter per FINRA regulations. Price charts for companies initiated upon in the current quarter, and rating and target price changes occurring in the current quarter, will not be displayed until the following quarter. Additional information on recommended securities is available on request.



* WS changed its rating system from (Strong Buy/Buy/Hold/Sell) to (Outperform/ Neutral/Underperform) on July 14, 2009.

Please access the attached hyperlink for WS' Coverage Universe: <http://www.wedbush.com/services/cmg/equities-division/research/equity-research> Applicable disclosure information is also available upon request by contacting Ellen Kang in the Research Department at (213) 688-4529, by email to ellen.kang@wedbush.com, or the Business Conduct Department at (213) 688-8090. You may also submit a written request to the following: Business Conduct Department, 1000 Wilshire Blvd., Los Angeles, CA 90017.

OTHER DISCLOSURES

RESEARCH DEPT. * (213) 688-4505 * www.wedbush.com

EQUITY TRADING Los Angeles (213) 688-4470 / (800) 421-0178 * **EQUITY SALES** Los Angeles (800) 444-8076

CORPORATE HEADQUARTERS (213) 688-8000

The information herein is based on sources that we consider reliable, but its accuracy is not guaranteed. The information contained herein is not a representation by this corporation, nor is any recommendation made herein based on any privileged information. This information is not intended to be nor should it be relied upon as a complete record or analysis; neither is it an offer nor a solicitation of an offer to sell or buy any security mentioned herein. This firm, Wedbush Securities, its officers, employees, and members of their families, or any one or more of them, and its discretionary and advisory accounts, may have a position in any security discussed herein or in related securities and may make, from time to time, purchases or sales thereof in the open market or otherwise. The information and expressions of opinion contained herein are subject to change without further notice. The herein mentioned securities may be sold to or bought from customers on a principal basis by this firm. Additional information with respect to the information contained herein may be obtained upon request.

WEDBUSH

EQUITY RESEARCH DEPARTMENT

(213) 688-4529

DIRECTOR OF RESEARCH

Mark D. Benson (213) 688-4435

MANAGER, RESEARCH OPERATIONS

Ellen Kang (213) 688-4529

RETAIL AND CONSUMER

Consumer Products

Rommel T. Dionisio (212) 938-9934
Alicia Reese (212) 938-9927

Footwear, Apparel and Accessories

Corinna Freedman (212) 668-9876

Healthy Lifestyles

Kurt M. Frederick, CFA CPA (415) 274-6822
Alicia Reese (212) 938-9927

Restaurants

Nick Setyan (213) 688-4519
Colin Radke (213) 688-6624

Specialty Retail: Hardlines

Joan L. Storms, CFA (213) 688-4537
John Garrett, CFA (213) 688-4523

Seth Basham, CFA (212) 938-9954

Specialty Retail: Softlines

Morry Brown (213) 688-4311
Taryn Kuida (213) 688-4505

RETAIL/CONSUMER MARKET RESEARCH

Gabriella Santaniello (213) 688-4557

INDUSTRIAL GROWTH TECHNOLOGY

Clean Technology

Craig Irwin (212) 938-9926

Environmental Services / Building Products

Al Kaschalk (213) 688-4539

Water and Renewable Energy Solutions

David Rose, CFA (213) 688-4319
James Kim (213) 688-4380

TECHNOLOGY, INTERNET, MEDIA & SOCIAL MEDIA

Communications and Application Software

Shyam Patil, CFA (213) 688-8062
Andy Cheng (213) 688-4548

Enterprise Security

Sanjit Singh (415) 273-7323

Computer Services: Financial Technology

Gil B. Luria (213) 688-4501
Aaron Turner (213) 688-4429

Enterprise Software

Steve Koenig (415) 274-6801
Kevin Ikeda (213) 688-4423

Entertainment: Retail

Michael Pachter (213) 688-4474
Nick McKay (213) 688-4343
Nick Citrin (213) 688-4495

Entertainment: Software

Michael Pachter (213) 688-4474
Nick McKay (213) 688-4343
Nick Citrin (213) 688-4495

Internet: Media and Gaming

Michael Pachter (213) 688-4474
Nick McKay (213) 688-4343
Nick Citrin (213) 688-4495

Internet: Social Media, Advertising & Technology

Shyam Patil, CFA (213) 688-8062
Andy Cheng (213) 688-4548

Media

James Dix, CFA (213) 688-4315

Movies and Entertainment

Michael Pachter (213) 688-4474
Nick McKay (213) 688-4343
Nick Citrin (213) 688-4495

Semiconductors

Betsy Van Hees (415) 274-6869
Ryan Jue, CFA (415) 263-6669

LIFE SCIENCES AND HEALTH CARE

Biotechnology/Biopharmaceuticals/BioDefense

David M. Nierengarten, Ph.D. (415) 274-6862
Christopher N. Marai, Ph.D. (415) 274-6861
Dilip Joseph (415) 273-7308

Emerging Pharmaceuticals

Liana Moussatos, Ph.D. (415) 263-6626

Healthcare Services - Managed Care

Sarah James (213) 688-4503

Medical Devices

Tao Levy (212) 938-9948

Medical Diagnostics and Life Sciences Tools

Zarak Khurshid (415) 274-6823

EQUITY SALES

Los Angeles (213) 688-4470 / (800) 444-8076
San Francisco (415) 274-6800
New York (212) 938-9931
Boston (617) 832-3700

EQUITY TRADING

Los Angeles (213) 688-4470 / (800) 421-0178
San Francisco (415) 274-6811
New York (212) 344-2382
Boston (617) 832-3700

CORPORATE HEADQUARTERS

1000 Wilshire Blvd., Los Angeles, CA 90017-2465
Tel: (213) 688-8000 www.wedbush.com