UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

Celladon Corporation

(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization) 2836

(Primary Standard Industrial Classification Code Number)

33-0971591 (I.R.S. Employer Identification Number)

12760 High Bluff Drive, Suite 240 San Diego, California 92130 (858) 366-4288

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Krisztina M. Zsebo, Ph.D. President and Chief Executive Officer Celladon Corporation

12760 High Bluff Drive, Suite 240 San Diego, California 92130 (858) 366-4288

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Jason L. Kent, Esq. Cooley LLP 4401 Eastgate Mall San Diego, California 92121 (858) 550-6000 Cheston J. Larson, Esq. Michael E. Sullivan, Esq. Latham & Watkins LLP 12636 High Bluff Drive, Suite 400 San Diego, California 92130 (858) 523-5400

	If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of
1933	as amended (the "Securities Act"), check the following box

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \boxtimes (File No. 333-191688)

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \Box

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

CALCULATION OF REGISTRATION FEE

	Amount	Proposed maximum	Proposed maximum	
Title of each class of securities to be registered	to be registered(1)	offering price per share	aggregate offering price(2)	Amount of registration fee(3)
Common Stock, \$0.0001 par value per share	575,000	\$8.00	\$4,600,000	\$592.48

- (1) The Registrant is registering 575,000 shares pursuant to this Registration Statement, which shares are in addition to the 5,750,000 shares registered pursuant to the Form S-1 Registration Statement (Registration No. 333-191688). Includes 75,000 shares which the underwriters have the option to purchase.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(a) under the Securities Act of 1933, as amended. Includes the aggregate offering price of shares that the underwriters have the option to purchase.
- (3) The Registrant certifies to the Securities and Exchange Commission that it has instructed its bank to pay the Commission the filing fee set forth above for the additional securities being registered hereby by wire transfer as soon as practicable (but in any event no later than the close of business on January 30, 2014), that it will not revoke such instructions, and that it has sufficient funds in such account to cover the amount of such filing fee.

This Registration Statement shall become effective upon filing in accordance with Rule 462(b) under the Securities Act of 1933.

EXPLANATORY NOTE AND INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

This Registration Statement is being filed with the Securities and Exchange Commission (the "Commission") with respect to the registration of additional shares of common stock, par value \$0.0001 per share, of Celladon Corporation, a Delaware corporation, pursuant to Rule 462(b) under the Securities Act of 1933, as amended. This Registration Statement incorporates by reference the contents of, including all amendments and exhibits thereto and all information incorporated by reference therein, the Registration Statement on Form S-1 (Registration No. 333-191688), which was declared effective by the Commission on January 29, 2014, and is being filed solely for the purpose of increasing the number of shares to be offered in the public offering by 575,000 shares, including 75,000 shares that may be sold pursuant to the underwriter's option to purchase additional shares.

The required opinions and consents are listed on the Exhibit Index attached hereto.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on the 29th day of January, 2014.

CELLADON CORPORATION

/s/ Krisztina M. Zsebo, Ph.D.

Krisztina M. Zsebo, Ph.D.

President and Chief Executive Officer

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ Krisztina M. Zsebo, Ph.D. Krisztina M. Zsebo, Ph.D.	President, Chief Executive Officer and Member of the Board of Directors (Principal Executive Officer)	January 29, 2014
/s/ Rebecque J. Laba Rebecque J. Laba	Vice President, Finance and Administration (Principal Financial and Accounting Officer)	January 29, 2014
/s/ Michael Narachi Michael Narachi	Chairman of the Board of Directors	January 29, 2014
/s/ Gregg Alton* Gregg Alton	Member of the Board of Directors	January 29, 2014
/s/ Fouad Azzam, Ph.D.* Fouad Azzam, Ph.D.	Member of the Board of Directors	January 29, 2014
/s/ Graham Cooper* Graham Cooper	Member of the Board of Directors	January 29, 2014
/s/ Barbara J. Dalton, Ph.D.* Barbara J. Dalton, Ph.D.	Member of the Board of Directors	January 29, 2014
/s/ Todd Foley* Todd Foley	Member of the Board of Directors	January 29, 2014
/s/ Joshua Funder, Ph.D.* Joshua Funder, Ph.D.	Member of the Board of Directors	January 29, 2014
/s/ Johan Kördel, Ph.D.* Johan Kördel, Ph.D.	Member of the Board of Directors	January 29, 2014
/s/ Daniel Omstead, Ph.D.* Daniel Omstead, Ph.D.	Member of the Board of Directors	January 29, 2014
/s/ Andrew E. Senyei, M.D.* Andrew E. Senyei, M.D.	Member of the Board of Directors	January 29, 2014
/s/ Lauren Silverman, Ph.D.* Lauren Silverman, Ph.D.	Member of the Board of Directors	January 29, 2014
*pursuant to Power of Attorney		

By: /s/ Krisztina M. Zsebo, Ph.D.

Krisztina M. Zsebo, Ph.D.

EXHIBIT INDEX

Exhibit <u>Number</u>	Description of Document
5.1	Opinion of Cooley LLP.
23.1	Consent of Ernst & Young LLP, an Independent Registered Public Accounting Firm.
23.2	Consent of Cooley LLP. Reference is made to Exhibit 5.1.
24.1(1)	Power of Attorney.

⁽¹⁾ Included on the signature page of Registration Statement on Form S-1 (File No. 333-191688), filed with the Securities and Exchange Commission on October 11, 2013, and incorporated herein by reference.



Jason L. Kent T: +1 858 550 6044 jkent@cooley.com

January 29, 2014

Celladon Corporation 12760 High Bluff Drive, Suite 240 San Diego, CA 92130

Ladies and Gentlemen:

We represent Celladon Corporation, a Delaware corporation (the "Company"), and you have requested our opinion with respect to certain matters in connection with the filing by the Company, of a Registration Statement on Form S-1 (the "Registration Statement") with the Securities and Exchange Commission pursuant to Rule 462(b) of Regulation C promulgated under the Securities Act of 1933, as amended, relating to an aggregate of 575,000 shares of common stock, par value \$0.0001 (the "Shares"), including up to 75,000 shares that may be sold by the Company pursuant to the exercise of an overallotment option. The Registration Statement incorporates by reference the Registration Statement on Form S-1 (No. 333-191688), which was declared effective on January 29, 2014, including the prospectus which forms a part of such Registration Statement (the "Prospectus").

In connection with this opinion, we have examined and relied upon (a) the Registration Statement and related Prospectus, (b) the Company's Amended and Restated Certificate of Incorporation, and Bylaws, as amended, as currently in effect, (c) the Company's Amended and Restated Certificate of Incorporation, filed as Exhibit 3.2 to the Registration Statement and the Company's Amended and Restated Bylaws, filed as Exhibit 3.4 to the Registration Statement, each of which is to be in effect upon the closing of the offering contemplated by the Registration Statement, and (d) the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals and the conformity to originals of all documents submitted to us as copies. As to certain factual matters, we have relied upon a certificate of officers of the Company and have not sought independently to verify such matters. Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion as to whether the laws of any particular jurisdiction are applicable to the subject matter hereof. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued against payment therefor as described in the Registration Statement and the related Prospectus, will be validly issued, fully paid and non-assessable.

4401 EASTGATE MALL, SAN DIEGO, CA 92121 T: (858) 550-6000 F: (858) 550-6420 WWW.COOLEY.COM



Celladon Corporation January 29, 2014 Page Two

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus included in the Registration Statement and to the filing of this opinion as an exhibit to the Registration Statement.

Sinc	erely,	
Cool	ey LLP	
By:	/s/ Jason L. Kent	
	Jason L. Kent	

 $4401\;EASTGATE\;MALL,\;SAN\;DIEGO,\;CA\;92121\;T:\;(858)\;550-6000\;F:\;(858)\;550-6420\;WWW.COOLEY.COM$

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" included in the Registration Statement (Form S-1 No. 333-191688) and related Prospectus of Celladon Corporation and to the incorporation by reference in this Registration Statement (Form S-1) filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended, of Celladon Corporation for the registration of 575,000 additional shares of its common stock, of our report dated September 6, 2013 (except for paragraph 5 of Note 9 as to which the date is October 28, 2013), with respect to the consolidated financial statements of Celladon Corporation included in its Registration Statement (Form S-1 No. 333-191688) and related Prospectus of Celladon Corporation, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Diego, California January 29, 2014