UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Semler Scientific, Inc.

(Exact name of registrant as specified in its charter)

D	eiaware	
(State or other jurisdiction	of incorporation	or organization)

26-1367393 (I.R.S. Employer Identification No.)

2330 NW Everett St.
Portland, Oregon 97210
(Address of Principal Executive Offices)

97210 (Zip Code)

Semler Scientific, Inc. 2014 Stock Incentive Plan

(Full title of the plan)

Douglas Murphy-Chutorian, M.D. Chief Executive Officer Semler Scientific, Inc. 2330 NW Everett St. Portland, OR 97210 Telephone: (877) 774-4211

(Name and address and telephone number, including area code, of agent for service)

Copies to: Yvan-Claude J. Pierre, Esq. Marianne C. Sarrazin, Esq. Cooley LLP 1114 Avenue of the Americas New York, NY 10036-7798 (212) 479-6000

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 \Box	Accelerated filer \square	
Non-accelerated filer \Box (Do not check if a smaller reporting company)	Smaller reporting company þ	

CALCULATION OF REGISTRATION FEE

		Proposed maximum		
Title of securities		offering	Proposed maximum	Amount of
to be registered	Amount to be registered (1)	 price per share (2)	 aggregate offering price	 Registration Fee
Common Stock (par value \$0.001 per share),				
issuable under the 2014 Stock Incentive Plan	1,688,640 shares	\$ 3.42	\$ 5,775,148.80	\$ 581.56

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933 as amended (the "Act"), this Registration Statement includes an indeterminate number of additional shares that may be offered and issued to prevent dilution from stock splits, stock dividends or similar transactions as provided in the above-referenced plan.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(h). The price per share and aggregate offering price are based upon \$3.42 per share, the average of the high and low prices of Registrant's Common Stock on October 30, 2015 as reported on the NASDAQ Capital Market.

EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed for the purpose of registering an additional 1,688,640 shares of Common Stock of Semler Scientific, Inc. (the "Registrant") issuable pursuant to the Semler Scientific, Inc. 2014 Stock Incentive Plan (the "2014 Plan"). These additional shares of Common Stock are securities of the same class as other securities for which an original registration statement on Form S-8 (File No. 333-198891) was filed with the Securities and Exchange Commission (the "Commission") on September 23, 2014. These additional shares of Common Stock have become reserved for issuance as a result of (i) the operation of the "evergreen" provisions in the 2014 Plan, which provides that the total number of shares subject to such plans will be increased each year pursuant to a specified formula and (ii) an approval of the 2014 Plan, as amended (the "Amendment") which increased the number of shares of Common Stock authorized for issuance thereunder by 1,500,000 shares. The Amendment was approved by the Company's stockholders at the Company's 2015 Annual Meeting of Stockholders held on October 29, 2015.

PART II

Item 3. Incorporation of Documents by Reference

The following documents filed by the Registrant with the Commission are incorporated by reference into this Registration Statement:

- (a) the description of the Registrant's Common Stock which is contained in the Registrant's registration statement on Form 8-A filed on February 7, 2014 (File No. 001-36305) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including any amendment or report filed for the purpose of updating such description;
- (b) the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2014, which includes audited financial statements for the Registrant's latest fiscal year, filed with the Commission on February 13, 2015, and amended on April 28, 2015;
 - (c) the Registrant's Quarterly Reports on Form 10-Q for the quarters ended March 31, 2015, June 30, 2015 and September 30, 2015;
- (d) the Registrant's Current Reports on Form 8-K, filed with the Commission on April 7, 2015, July 24, 2015, as amended July 28, 2015, August 14, 2015, September 21, 2015 and November 2, 2015; and
- (e) all other reports and documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that relate to such items) on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be a part of this Registration Statement from the date of the filing of such reports and documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document that also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act.

The Registrant's amended and restated certificate of incorporation and amended and restated bylaws provide that the Registrant will indemnify its directors and officers, and may indemnify its employees and other agents, to the fullest extent permitted by the Delaware General Corporation Law. However, Delaware law prohibits the Registrant's certificate of incorporation from limiting the liability of the Registrant's directors for the following:

- · any breach of the director's duty of loyalty to the corporation or to its stockholders;
- · acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- · unlawful payment of dividends or unlawful stock repurchases or redemptions; and
- · any transaction from which the director derived an improper personal benefit.

The Registrant has entered into indemnification agreements with each of its directors and officers and some of its employees. These agreements provide for the indemnification of such persons for all reasonable expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were serving in such capacity.

The Registrant may maintain insurance policies that indemnify its directors and officers against various liabilities arising under the Securities Act and the Exchange Act that might be incurred by any director or officer in his capacity as such. The Registrant has obtained director and officer liability insurance to cover liabilities directors and officers may incur in connection with their services to the Registrant.

Item 7. Exemption From Registration Claimed.

Not applicable.

Item 8. Exhibits

Exhibit Number	
4.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K, filed with the Securities and Exchange Commission on November 2, 2015).
4.2	Bylaws (incorporated by reference to Exhibit 3.2 of the Registrant's Form S-1 Registration Statement, as amended (File No. 333-192362), filed with the Securities and Exchange Commission on November 15, 2013).
4.3	Form of common stock certificate of the Registrant (incorporated by reference to Exhibit 4.1 of the Registrant's Form S-1 Registration Statement, as amended (File No. 333-192362), filed with the Securities and Exchange Commission on November 15, 2013).
5.1	Opinion of Cooley LLP.
23.1	Consent of BDO USA, LLP.
23.2	Consent of Cooley LLP is contained in Exhibit 5 to this Registration Statement.
24.1	Power of Attorney is contained on the signature pages.

- 99.1 Semler Scientific, Inc. 2014 Stock Incentive Plan, as amended (incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed with the Securities and Exchange Commission on November 2, 2015).
- 99.2 Form of 2014 Stock Incentive Plan Stock Option Grant Notice and Option Agreement (incorporated by reference to Exhibit 10.1 of the Registrant's Form 10-Q filed with the Securities and Exchange Commission on November 3, 2015).

Item 9. Undertakings

- (a) The undersigned registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement to include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement.
 - (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
 - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of the expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Portland, State of Oregon, on November 3, 2015.

SEMLER SCIENTIFIC, INC.

/s/ Douglas Murphy-Chutorian
Douglas Murphy-Chutorian

Chief Executive Officer

POWER OF ATTORNEY

Know All Persons By These Presents, that each person whose signature appears below constitutes and appoints Douglas Murphy-Chutorian and Daniel Conger, and each one of them, his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or either of them, or his substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Douglas Murphy-Chutorian Douglas Murphy-Chutorian, M.D.	Chief Executive Officer and Director (Principal Executive Officer)	November 3, 2015
/s/ James M. Walker James M. Walker	Chief Financial Officer (Principal Accounting Officer)	November 3, 2015
/s/ Herbert J. Semler Herbert J. Semler, M.D.	Chairman of the Board of Directors	November 3, 2015
/s/ Bruce J Barclay Bruce J Barclay	Director	November 3, 2015
/s/ Aidan M. Collins Aidan M. Collins	Director	November 3, 2015
/s/ Greg S. Garfield Greg S. Garfield	Director	November 3, 2015
/s/ Arthur N. Leibowitz Arthur N. Leibowitz, M.D., F.A.A.P	Director	November 3, 2015
/s/ Wayne T. Pan Wayne T. Pan, M.D., Ph.D.	Director	November 3, 2015
/s/ Shirley L. Semler Shirley L. Semler	Director	November 3, 2015

EXHIBIT INDEX

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YVAN-CLAUDE PIERRE +1 212 479 6721 ypierre@cooley.com

November 3, 2015

Semler Scientific, Inc. 2330 NW Everett St. Portland, Oregon 97210

Ladies and Gentlemen:

You have requested our opinion, as counsel to Semler Scientific, Inc., a Delaware corporation (the "Company"), in connection with the filing by the Company of a Registration Statement on Form S-8 (the "Registration Statement") with the Securities and Exchange Commission covering the offering of up to 1,688,640 shares (the "Shares") of the Company's Common Stock, par value \$0.001 per share (the "Common Stock"), pursuant to the Company's 2014 Stock Incentive Plan, as amended (the "Plan").

In connection with this opinion, we have examined and relied upon (a) the Registration Statement and the related prospectuses, (b) the Company's Amended and Restated Certificate of Incorporation and the Company's Amended and Restated Bylaws, each as currently in effect, (c) the Plan, 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, the conformity to originals of all documents submitted to us as copies, the accuracy, completeness and authenticity of certificates of public officials; and the due authorization, execution and delivery of all documents by all persons other than the Company where authorization, execution and delivery are prerequisites to the effectiveness of such documents. As to certain factual matters, we have relied upon a certificate of an officer 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 other than those identified above are applicable to the subject matter of this opinion. We are not rendering any opinion as to compliance with any federal or state 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 in accordance with the Plan, the Registration Statement and the related prospectuses, will be validly issued, fully paid and nonassessable (except as to shares issued pursuant to certain deferred payment arrangements, which will be fully paid and nonassessable when such deferred payments are made in full).

We consent to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

COOLEY LLP

By: /s/ Yvan-Claude Pierre

Yvan-Claude Pierre

COOLEY LLP 1114 AVENUE OF THE AMERICAS NEW YORK, NY 10036 T: (212) 479-6000 F: (212) 479-6275 COOLEY.COM

Consent of Independent Registered Public Accounting Firm

Semler Scientific, Inc. Portland, Oregon

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated February 13, 2015, relating to the financial statements of Semler Scientific, Inc. appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2014. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

/s/ BDO USA, LLP New York, New York

November 3, 2015

BDO USA, LLP, a Delaware limited liability partnership, is the U.S. member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of independent member firms.

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