

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

PRE-EFFECTIVE AMENDMENT NO. 1
TO
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

MELA Sciences, Inc.
(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

13-3986004
(I.R.S. Employer
Identification No.)

MELA Sciences, Inc.
100 Lakeside Drive, Suite 100
Horsham, Pennsylvania 19044
(215) 619-3200

(Address, including zip code, and telephone number, including area code,
of Registrant's principal executive offices)

Michael R. Stewart
President and Chief Executive Officer
MELA Sciences, Inc.
100 Lakeside Drive, Suite 100
Horsham, Pennsylvania 19044
(215) 619-3200

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

Copies to:

John W. Kauffman, Esq.
Duane Morris LLP
30 South 17th Street
Philadelphia PA, 19103
(215) 979-1227

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

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, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. £

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. £

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. £

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following 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 definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

<u>Title of each class of securities to be registered</u>	<u>Amount to be registered(1)</u>	<u>Proposed maximum offering price per unit(2)</u>	<u>Proposed maximum aggregate offering price</u>	<u>Amount of registration fee</u>
Common stock, \$0.001 per share	2,992,259(3)	1.195(2)	\$ 3,575,749.51(2)	\$ 415.50(4)

(1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement includes an indeterminate number of additional shares that may be offered and sold to prevent dilution resulting from stock splits, stock dividends or similar transactions.

(2) In accordance with Rule 457(c) under the Securities Act, the aggregate offering price of the common stock is estimated solely for the calculation of the registration fees due for this filing. This estimate was based on the average of the high and low sales price of our stock reported by The Nasdaq Capital Market on July 17, 2015.

(3) Represents shares of common stock that may be issued upon the conversion of convertible debentures with a principal amount of \$2,244,194.

(4) This registration fee was paid with the initial filing on July 22, 2015.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

Explanatory Note

MELA Sciences, Inc. (the "Company") is filing this pre-effective Amendment No. 1 (the "Amendment") to its Registration Statement on Form S-3 (Registration Statement No. 333-205797) as an exhibit only filing to file Exhibit 5.1 and to restate the list of exhibits set forth in Item 16 of Part II of the Registration Statement. Accordingly, this Amendment consists only of the facing page, this explanatory note, Part II of the Registration Statement, the signature pages to the Registration Statement and the filed exhibit. The prospectus is unchanged and has been omitted.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses payable by MELA in connection with the issuance and distribution of the shares of common stock being registered. The selling stockholder will not bear any portion of such expenses. All such expenses are estimated except for the SEC registration fee.

SEC registration fee	\$	415.50
Legal fees and expenses(1)		25,000.00
Accounting fees and expenses(1)		15,000.00
Printing and miscellaneous expenses(1)		1,584.50
TOTAL(1)	\$	42,000.00

(1) Estimated.

Item 15. Indemnification of Directors and Officers.

Our amended and restated certificate of incorporation includes provisions that eliminate, to the fullest extent permitted by the Delaware General Corporation Law (the "DGCL"), the personal liability of our directors to us or our stockholders for monetary damages for breach of fiduciary duty as a director. Our amended and restated bylaws require us to indemnify our directors and officers to the fullest extent permitted by the DGCL. Pursuant to these provisions, we have entered into indemnity agreements with our directors and officers.

Pursuant to Section 145 of the DGCL, a corporation generally has the power to indemnify its present and former directors, officers, employees and agents against expenses incurred by them in connection with any suit to which they are, or are threatened to be made, a party by reason of their serving in such positions so long as they acted in good faith and in a manner that they reasonably believed to be in, or not opposed to, the best interests of the corporation and, with respect to any criminal action, had no reasonable cause to believe their conduct was unlawful.

These provisions do not eliminate the duty of care, and in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, may remain available under Delaware law. Each director will continue to be subject to liability for breach of the director's duty of loyalty to us or our stockholders, for acts or omissions not in good faith or involving intentional misconduct or knowing violations of law, for unlawful payments of dividends or unlawful stock repurchases or redemptions under Section 174 of the DGCL or for any transaction from which the director derived an improper personal benefit. These provisions also generally do not affect a director's responsibilities under any other laws, such as the federal securities laws.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable.

Item 16. Exhibits.

<u>No.</u>	<u>Description</u>
3.1	Fifth Amended and Restated Certificate of Incorporation of the Company. (Incorporated by reference to our Registration Statement on Form S-3 (File No. 333-167113), as filed on May 26, 2010.)
3.2	Certificate of Amendment to Fifth Amended and Restated Certificate of Incorporation of the Company (Incorporated by reference to our Registration Statement on Form S-3 (File No. 333-189118), as filed on June 5, 2013.)
3.3	Certificate of Amendment to Fifth Amended and Restated Certificate of Incorporation of the Company. (Incorporated by reference to Exhibit 3.1 contained in our Current Report on Form 8-K (File No. 000-51481), filed on July 10, 2014.)
3.5	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock. (Incorporated by reference to Exhibit 3.1 contained in our Current Report on Form 8-K (File No. 000-51481), filed on July 24, 2014.)
3.6	Fourth Amended and Restated By-laws of Company. (Incorporated by reference to Exhibit 3.2 contained in our Current Report on Form 8-K (File No. 000-51481), as filed on July 21, 2015.)
4.1	Form of 2015 Warrant to purchase common stock issued to Purchasers. Incorporated by reference to Exhibit 4.1 contained in our Current Report on Form 8-K (File No. 000-51481), filed on June 23, 2015.)
4.2	Form of Senior Secured Convertible Debenture issued to Purchasers. (Incorporated by reference to Exhibit 4.2 contained in our Current Report on Form 8-K (File No. 000-51481), filed on June 23, 2015.)
5.1	Opinion of Duane Morris LLP (filed herewith)
10.1	Form of Securities Purchase Agreement. (Incorporated by reference to Exhibit 10.1 contained in our Current Report on Form 8-K (File No. 000-51481), filed on June 23, 2015.)
10.2	Form of Registration Rights Agreement. (Incorporated by reference to Exhibit 10.2 contained in our Current Report on Form 8-K (File No. 000-51481), filed on June 23, 2015.)
10.3	Form of Security Agreement. (Incorporated by reference to Exhibit 10.3 contained in our Current Report on Form 8-K (File No. 000-51481), filed on June 23, 2015.)
23.1	Consent of Duane Morris LLP (included in Exhibit 5.1, filed herewith)
23.2	Consent of Independent Registered Public Accounting Firm (included in initial filing of this registration statement)
23.3	Consent of Independent Certified Public Accountants (included in initial filing of this registration statement)
24.1	Powers of Attorney (included in signature pages of the initial filing of this registration statement)

Item 17. Undertakings.

We hereby undertake:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

provided, however, that paragraphs (i), (ii) and (iii) above do not apply if the information required to be included in a post-effective amendment by those clauses is contained in reports filed with or furnished to the SEC by us pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of 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.

(4) That, for the purpose of determining liability under the Securities Act, to any purchaser:

(i) If we are relying on Rule 430B:

(A) Each prospectus filed by us pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(ii) If we are subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) That, for the purpose of determining our liability under the Securities Act, to any purchaser in the initial distribution of the securities, we undertake that in a primary offering of our securities pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, we will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of ours relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of us or used or referred to by us;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about us or our securities provided by or on behalf of us; and

(iv) Any other communication that is an offer in the offering made by us to the purchaser.

(6) That, for purposes of determining any liability under the Securities Act, each filing of our annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the 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.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the provisions described in Item 15 above, or otherwise, we have been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities, other than the payment by us of expenses incurred or paid by a director, officer or controlling person of us 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, that we 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 Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Horsham, Commonwealth of Pennsylvania, on August 5, 2015.

MELA SCIENCES, INC.

By: /s/ Michael R. Stewart
Michael R. Stewart
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act, the 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>
<u>/s/ Michael R. Stewart</u> Michael R. Stewart	President and Chief Executive Officer (principal executive officer)	August 5, 2015
<u>/s/ Robert W. Cook</u> Robert W. Cook	Chief Financial Officer, Secretary and Treasurer (principal financial and accounting officer)	August 5, 2015
<u>*</u> Jeffrey O'Donnell	Director	August 5, 2015
<u>*</u> Samuel E. Navarro	Director	August 5, 2015
<u>*</u> David K. Stone	Director	August 5, 2015
<u>*</u> Kathryn Swintek	Director	August 5, 2015
<u>*</u> LuAnn Via	Director	August 5, 2015
<u>*By: /s/ Robert W. Cook</u> Robert W. Cook, attorney-in-fact		

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MIRANDA & ESTAVILLO
SRI LANKA
ALLIANCE WITH
GOWERS INTERNATIONAL

August 5, 2015

Board of Directors
MELA Sciences, Inc.
100 Lakeside Drive, Suite 100
Horsham, Pennsylvania 19044

Re: MELA Sciences, Inc. (the "Corporation")
Form S-3 Registration Statement

Ladies and Gentlemen:

We have acted as counsel to MELA Sciences, Inc. (the "Company") in connection with the preparation and filing with the Securities and Exchange Commission under the Securities Act of 1933, as amended, of a Registration Statement on Form S-3 (Registration No. 333-205797) (the "Registration Statement"), relating to the offer and sale by certain holders of the Company's 2.25% Senior Convertible Debentures issued on June 22, 2015 (the "Debentures") of up to an aggregate of 2,992,259 shares (the "Shares") of common stock, \$0.001 par value, of the Company ("Common Stock") issuable upon conversion of up to an aggregate of \$2,244,195 principal amount of the Debentures (the "Allotted Debentures").

As counsel to the Company, we have supervised all corporate proceedings in connection with the preparation and filing of the Registration Statement.

For purposes of rendering this opinion, we have examined originals or copies (certified or otherwise identified to our satisfaction) of:

- a. The forms of Debentures;

DUANE MORRIS LLP

30 SOUTH 17TH STREET PHILADELPHIA, PA 19103-4196

PHONE: 215.979.1000

FAX: 215.979.1020

Board of Directors
MELA Sciences, Inc.
August 5, 2015
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- b. The Fifth Amended and Restated Certificate of Incorporation of the Company, as amended, in the form filed with the Securities and Exchange Commission;
- d. The Fourth Amended and Restated By-laws of the Company, in the form filed with the Securities and Exchange Commission; and
- e. Resolutions of the Board of Directors of the Company, as attested by the Secretary of the Corporation.

We have also examined such other certificates of public officials, such certificates of executive officers of the Company and such other records, agreements, documents and instruments as we have deemed relevant and necessary as a basis for the opinions hereafter set forth.

In such examination, we have assumed: (i) the genuineness of all signatures, (ii) the legal capacity of all natural persons, (iii) the authenticity of all documents submitted to us as originals, (iv) the conformity to original documents of all documents submitted to us as certified, conformed or other copies and the authenticity of the originals of such documents and (v) that all records and other information made available to us by the Company on which we have relied are complete in all material respects. As to all questions of fact material to these opinions, we have relied solely upon the above-referenced certificates or comparable documents, have not performed or had performed any independent research of public records and have assumed that certificates of or other comparable documents from public officials dated prior to the date hereof remain accurate as of the date hereof.

Based upon the foregoing, we are of the opinion that the issuance of the Shares, upon conversion of Allotted Debentures duly effected in accordance with the terms thereof, will result in the Shares being legally issued, fully paid and non-assessable.

The foregoing opinion is limited to the laws of the State of Delaware, and we do not express any opinion herein concerning any other law.

The opinion expressed herein is rendered as of the date hereof and is based on existing law, which is subject to change. Where our opinion expressed herein refers to events to occur at a future date, we have assumed that there will have been no changes in the relevant law or facts between the date hereof and such future date. We do not undertake to advise you of any changes in the opinion expressed herein from matters that may hereafter arise or be brought to our attention or to revise or supplement such opinions should the present laws of any jurisdiction be changed by legislative action, judicial decision or otherwise.

Our opinion expressed herein is limited to the matters expressly stated herein, and no opinion is implied or may be inferred beyond the matters expressly stated.

Board of Directors
MELA Sciences, Inc.
August 5, 2015
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We hereby consent to the use of this letter as an exhibit to the Registration Statement and to any and all references to our firm in the prospectus that is a part of the Registration Statement under the caption "Legal Matters." In giving this consent, we do not admit that we are "experts" within the meaning of Section 11 of the Securities Act or within the category of persons whose consent is required under Section 7 of the Securities Act.

Sincerely,

/s/ Duane Morris LLP
