

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

**FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

GenMark Diagnostics, Inc.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

3841
(Primary Standard Industrial
Classification Code Number)

27-2053069
(I.R.S. Employer
Identification Number)

**757 S. Raymond Avenue
Pasadena, CA 91105
(626) 463-2000**

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

Jon Faiz Kayyem, Ph.D.
President and Chief Executive Officer
GenMark Diagnostics, Inc.
757 S. Raymond Avenue
Pasadena, CA 91105
(626) 463-2000

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

Copies to:

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

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, 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, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. 333-165562

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 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.

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 (Do not check if a smaller reporting company)

Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered ⁽¹⁾	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price ⁽¹⁾	Amount of Registration Fee
Common Stock, \$0.0001 par value per share	115,000	\$6.00	\$690,000	\$49.20 ⁽²⁾

(1) Includes the additional shares of common stock that are issuable upon exercise of the underwriters' over-allotment option.

(2) Previously paid.

The registration statement shall become effective upon filing with the Securities and Exchange Commission in accordance with 462(b) under the Securities Act of 1933 as amended.

EXPLANATORY NOTE

This registration statement is being filed with respect to the registration of additional shares of common stock of GenMark Diagnostics, Inc., a Delaware corporation, pursuant to Rule 462(b) under the Securities Act of 1933, as amended. The contents of the registration statement on Form S-1 (Registration No. 333-165562), initially filed by GenMark with the Securities and Exchange Commission on March 19, 2010, as amended by Amendment No. 1 thereto filed on April 20, 2010, Amendment No. 2 thereto filed on May 13, 2010, Amendment No. 3 thereto filed on May 21, 2010, Amendment No. 4 thereto filed on May 25, 2010 and Amendment No. 5 thereto filed on May 28, 2010, and which was declared effective on May 28, 2010, including the exhibits thereto, are incorporated herein by reference.

The required opinions and consents are listed on an Exhibit Index attached hereto and filed herewith.

PART II. INFORMATION NOT REQUIRED IN PROSPECTUS

Item 16. Exhibits

All exhibits filed with or incorporated by reference in Registration Statement No. 333-165562 are incorporated by reference into, and shall be deemed a part of this Registration Statement, except the following which are filed herewith:

<u>Exhibit Number</u>	<u>Description</u>
5.1	Opinion of DLA Piper LLP (US)
23.1	Consent of DLA Piper LLP (US) (included in Exhibit 5.1)
23.2	Consent of Deloitte & Touche LLP (US)
23.3	Consent of Deloitte LLP (UK)
24.1	Power of Attorney (incorporated by reference to the signature page included with the Registration Statement on Form S-1 of the Registrant (File No. 333-165562)).

DLA Piper LLP (US)
4365 Executive Drive
San Diego, CA 92121

May 28, 2010

GenMark Diagnostics, Inc.
757 S. Raymond Avenue
Pasadena, CA 91105

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing by GenMark Diagnostics, Inc., a Delaware corporation (the "**Company**"), of a Registration Statement on Form S-1 filed on May 28, 2010 (the "**462(b) Registration Statement**") pursuant to 462(b) under the Securities Act of 1933, as amended (the "**Act**"). The 462(b) Registration Statement incorporates by reference in its entirety the Registration Statement on Form S-1 (File No. 333-165562), initially filed with the Securities and Exchange Commission on March 19, 2010, as thereafter amended, and declared effective on May 28, 2010. The 462(b) Registration Statement relates to the offering for sale of an aggregate of up to 115,000 shares (the "**Shares**") of the Company's common stock, \$0.0001 par value ("**Common Stock**").

This opinion is being furnished in accordance with the requirements of Item 16(a) of Form S-1 and Item 601(b)(5)(i) of Regulation S-K.

In connection with this opinion, we have reviewed and relied upon the Registration Statement and Prospectus, the Company's charter documents, as amended and restated to date, records of the Company's corporate proceedings in connection with the offering, and such other documents, records, certificates, memoranda and other instruments as we deem necessary as a basis for this opinion. With respect to the foregoing documents, we have assumed the authenticity of all records, documents, and instruments submitted to us as originals, the genuineness of all signatures, the legal capacity of natural persons and the conformity to the originals of all records, documents, and instruments submitted to us as copies. We have also obtained from officers of the Company certificates as to certain factual matters and, insofar as this opinion is based on matters of fact, we have relied on such certificates without independent investigation.

We express no opinion concerning any law other than the Delaware General Corporation Law (including the statutory provisions, all applicable provisions of the Delaware Constitution and the reported judicial decisions interpreting the foregoing) and the federal law of the United States of America.

Based on such review, we are of the opinion that Shares have been duly authorized and, if, as, and when issued by the Company in accordance with the related Prospectus (as amended and supplemented through the date of issuance), will be validly issued, fully paid, and non-assessable.

We consent to the filing of this opinion as Exhibit 5.1 to the 462(b) Registration Statement and to the reference to this firm under the caption "Legal Matters" in the Prospectus that is part of the 462(b) Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, the rules and regulations of the Securities and Exchange Commission promulgated thereunder, or Item 509 of Regulation S-K.

This opinion is given to you solely for use in connection with the issuance and/or sale of the Shares in accordance with the 462(b) Registration Statement and the related Prospectus and is not to be relied on for any other purpose. Our opinion is expressly limited to the matters set forth above, and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Shares, or the Registration Statement.

Very truly yours,

/s/ DLA Piper LLP (US)

DLA Piper LLP (US)

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-1 filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended, of our report dated March 18, 2010, relating to the financial statement of GenMark Diagnostics, Inc. (the "Company") appearing in the Prospectus included in Registration Statement No. 333-165562.

/s/ Deloitte & Touche LLP

San Diego, CA

May 28, 2010

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-1 filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended, of our report dated March 19, 2010 relating to the financial statements of Osmetech plc, and subsidiaries appearing in the Prospectus included in Registration Statement No. 333-165562.

/s/ DELOITTE LLP

St. Albans, United Kingdom
May 28, 2010