

INSPIREMD, INC.

FORM S-1/A (Securities Registration Statement)

Filed 05/25/12

Address	321 COLUMBUS AVENUE BOSTON, MA 02116
Telephone	(857) 453-6553
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SIC Code	3841 - Surgical and Medical Instruments and Apparatus
Industry	Medical Equipment & Supplies
Sector	Healthcare
Fiscal Year	12/31

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

Amendment No. 1 to
FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

InspireMD, 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)

26-2123838
(I.R.S. Employer Identification No.)

**4 Menorat Hamaor St.
Tel Aviv, Israel 67448
972-3-691-7691**
(Address, including zip code, and telephone number,
including area code, of registrant's principal executive offices)

**Ofir Paz
Chief Executive Officer
InspireMD, Inc.
4 Menorat Hamaor St.
Tel Aviv, Israel 67448
972-3-691-7691**
(Name, address, including zip code, and telephone number,
including area code, of agent for service)

Copies of all communications, including communications sent to agent for service, should be sent to:

**Rick A. Werner, Esq.
Haynes and Boone, LLP
30 Rockefeller Plaza, 26th Floor
New York, New York 10112
Tel. (212) 659-7300
Fax (212) 884-8234**

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, 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 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 the 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)

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 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

This Amendment No. 1 to the Registration Statement is being filed solely to amend Part II of the Registration Statement to file Exhibit 5.1 to the Registration Statement.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

We are paying all of the selling stockholders' expenses related to this offering, except that the selling stockholders will pay any applicable underwriting discounts and commissions. The fees and expenses payable by us in connection with this Registration Statement are estimated as follows:

SEC Registration Fee	\$ 1,661.23
Accounting Fees and Expenses	10,000
Legal Fees and Expenses	25,000
Miscellaneous Fees and Expenses	3,338.77
Total	<u>\$ 40,000</u>

Item 14. Indemnification of Directors and Officers.

Section 145 of the General Corporation Law of the State of Delaware provides, in general, that a corporation incorporated under the laws of the State of Delaware, as we are, may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding (other than a derivative action by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe such person's conduct was unlawful. In the case of a derivative action, a Delaware corporation may indemnify any such person against expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation, except that no indemnification will be made in respect of any claim, issue or matter as to which such person will have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery of the State of Delaware or any other court in which such action was brought determines such person is fairly and reasonably entitled to indemnity for such expenses.

Our certificate of incorporation and bylaws provide that we will indemnify our directors, officers, employees and agents to the extent and in the manner permitted by the provisions of the General Corporation Law of the State of Delaware, as amended from time to time, subject to any permissible expansion or limitation of such indemnification, as may be set forth in any stockholders' or directors' resolution or by contract. Any repeal or modification of these provisions approved by our stockholders will be prospective only and will not adversely affect any limitation on the liability of any of our directors or officers existing as of the time of such repeal or modification.

We are also permitted to apply for insurance on behalf of any director, officer, employee or other agent for liability arising out of his actions, whether or not the General Corporation Law of the State of Delaware would permit indemnification.

Item 15. Recent Sales of Unregistered Securities.

On June 16, 2008, we completed an offering of 2,500,000 shares of our common stock at a price of \$0.005 per share to Lynn Briggs, our former president, chief executive officer, chief financial officer, secretary and treasurer. The total amount received from that offering was \$12,500. These shares were issued pursuant to Section 4(2) of the Securities Act of 1933, as amended, and corresponding provisions of state securities laws, which exempt transactions by an issuer not involving a public offering.

On March 31, 2011, pursuant to a share exchange agreement, we issued 46,471,907 shares of common stock to certain shareholders of InspireMD Ltd. in exchange for 91.7% of the issued and outstanding capital stock of InspireMD Ltd. Separately, we issued 4,194,756 shares of common stock to the remaining shareholders of InspireMD Ltd. in exchange for the remaining 8.3% of the issued and outstanding capital stock of InspireMD Ltd. In addition, in connection with the share exchange agreement, we (i) assumed three year warrants to purchase up to 125,000 ordinary shares of InspireMD Ltd. at an exercise price of \$10 per share that were converted into newly issued warrants to purchase up to 1,014,500 shares of our common stock at an exercise price of \$1.23 per share and (ii) options to purchase up to 937,256 ordinary shares of InspireMD Ltd. with a weighted average exercise price of \$4.35 that were converted into options to purchase up to 7,606,770 shares of our common stock with a weighted average exercise price of \$0.54 per share. The securities issued in the above described transactions were not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and were offered and sold pursuant to the exemption from registration under the Securities Act of 1933, as amended, provided by either Regulation S under the Securities Act of 1933, as amended, or Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended. Each of the shareholders of InspireMD Ltd. who received shares of our common stock in the above described share exchange transactions were either accredited investors (as defined by Rule 501 under the Securities Act of 1933, as amended) or not a “U.S. person” (as that term is defined in Rule 902 of Regulation S) at the time of the share exchange transactions.

On March 31, 2011, we entered into a securities purchase agreement with 30 accredited investors (as defined by Rule 501 under the Securities Act of 1933, as amended), pursuant to which we issued 6,454,002 shares of common stock and five-year warrants to purchase up to 3,226,999 shares of common stock at an exercise price of \$1.80 per share for aggregate cash proceeds of \$9,013,404 and the cancellation of \$667,596 of indebtedness held by investors. The securities sold in this offering were not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and were offered and sold in reliance on the exemption from registration under the Securities Act of 1933, as amended, provided by Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended.

On March 31, 2011, upon the consummation of the above described private placement, we issued a five-year warrant to purchase up to 373,740 shares of common stock at an exercise price of \$1.80 per share, to Palladium Capital Advisors, LLC, our placement agent in the private placement. The warrant was not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and was offered and sold in reliance on the exemption from registration afforded by Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended, and corresponding provisions of state securities laws, which exempt transactions by an issuer not involving a public offering. Palladium Capital Advisors, LLC was an accredited investor (as defined by Rule 501 under the Securities Act of 1933, as amended) at the time of the private placement.

On March 31, 2011, for work performed in connection with the share exchange transactions and as bonus compensation, we issued Craig Shore, our chief financial officer, secretary and treasurer, a five-year warrant to purchase up to 3,000 shares of common stock at an exercise price of \$1.80 per share. The warrant was not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and was offered and sold in reliance on the exemption from registration afforded by Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended, and corresponding provisions of state securities laws, which exempt transactions by an issuer not involving a public offering. Craig Shore was an accredited investor (as defined by Rule 501 under the Securities Act of 1933, as amended) at the time of the issuance of the warrant.

On March 31, 2011, upon the consummation of the private placement, we issued a five-year warrant to purchase up to 6,667 shares of common stock at an exercise price of \$1.80 per share, to Hermitage Capital Management, a consultant. The warrant was not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and was offered and sold in reliance on the exemption from registration afforded by Section 4(2) under the Securities Act of 1933, as amended, and corresponding provisions of state securities laws, which exempt transactions by an issuer not involving a public offering.

In consideration for financial consulting services, we issued to The Benchmark Company, LLC, a consultant, a five-year warrant to purchase up to 50,000 shares of common stock at an exercise price of \$1.50 per share. The warrant was not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and was offered and sold in reliance on the exemption from registration afforded by Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended, and corresponding provisions of state securities laws, which exempt transactions by an issuer not involving a public offering.

On March 31, 2011, we issued five-year warrants to purchase up to an aggregate of 2,500,000 shares of common stock at an exercise price of \$1.50 per share, to Endicott Management Partners, LLC, The Corbran LLC and David Stefansky, in consideration for consulting services. Pursuant to an agreement with us, of the total number of warrants issued, warrants to purchase 832,500 shares of common stock were placed in escrow, with the release of such warrants subject to the fulfillment or waiver of certain conditions. On November 16, 2011, our board of directors approved the release of all of the warrants held in escrow. The warrants were not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and were offered and sold in reliance on the exemption from registration afforded by Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended, and corresponding provisions of state securities laws, which exempt transactions by an issuer not involving a public offering. Each of Endicott Management Partners, LLC, The Corbran LLC and David Stefansky was an accredited investor (as defined by Rule 501 under the Securities Act of 1933, as amended) at the time of the issuance of the warrant.

On April 18, 2011, we consummated a private placement with an investor pursuant to which we sold 666,667 shares of our common stock and a five-year warrant to purchase up to 333,333 shares of common stock at an exercise price of \$1.80 per share for aggregate cash proceeds of \$1,000,000. The securities sold in this offering were not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and were offered and sold in reliance on the exemption from registration under the Securities Act of 1933, as amended, provided by Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended. This investor was an accredited investor (as defined by Rule 501 under the Securities Act of 1933, as amended) at the time of the private placement.

On April 18, 2011, we consummated a private placement with 2 accredited investors (as defined by Rule 501 under the Securities Act of 1933, as amended), pursuant to which we sold 283,334 shares of our common stock and a five-year warrant to purchase 141,667 shares of our common stock at an exercise price of \$1.80 per share, for aggregate cash proceeds of \$425,000. The securities sold in this offering were not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and were offered and sold in reliance on the exemption from registration under the Securities Act of 1933, as amended, provided by Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended.

On April 18, 2011, upon the consummation of the above described April 18, 2011 private placements, we issued a five-year warrant to purchase up to 57,000 shares of common stock at an exercise price of \$1.80 per share to Palladium Capital Advisors, LLC, our placement agent in the April 18, 2011 private placements. The warrant was not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and was offered and sold in reliance on the exemption from registration afforded by Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended, and corresponding provisions of state securities laws, which exempt transactions by an issuer not involving a public offering. Palladium Capital Advisors, LLC was an accredited investor (as defined by Rule 501 under the Securities Act of 1933, as amended) at the time of the private placement.

On April 21, 2011, we consummated a private placement with Mr. Reinder Hogeboom pursuant to which we sold 33,333 shares of our common stock and a five-year warrant to purchase 16,667 shares of our common stock at an exercise price of \$1.80 per share, for aggregate cash proceeds of \$50,000. The securities sold in this offering were not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and were offered and sold in reliance on the exemption from registration under the Securities Act of 1933, as amended, provided by Regulation S under the Securities Act of 1933, as amended. Reinder Hogeboom was not a "U.S. person" (as that term is defined in Rule 902 of Regulation S) at the time of the private placement.

On January 4, 2011, we entered into a convertible loan agreement with our distributor in Israel, in the amount of \$100,000. On June 1, 2011, we issued 81,161 shares of common stock to the lender upon conversion of the note. These securities were not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and were offered and sold in reliance on the exemption from registration under the Securities Act of 1933, as amended, provided by Regulation S under the Securities Act of 1933, as amended. The lender was not a "U.S. person" (as that term is defined in Rule 902 of Regulation S) at the time of the issuance.

On April 5, 2012, we issued senior secured convertible debentures in the original aggregate principal amount of \$11,702,128 and five-year warrants to purchase an aggregate of 3,343,465 shares of our common stock at an exercise price of \$1.80 per share to certain accredited investors in a private placement transaction. The securities sold in this offering were not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and were offered and sold in reliance on the exemption from registration under the Securities Act of 1933, as amended, provided by Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended.

As consideration for serving as our placement agents in connection with certain private placements, on April 5, 2012 we issued Palladium Capital Advisors, LLC a five-year warrant to purchase up to 159,574 shares of common stock at an exercise price of \$1.80 per share, Oppenheimer & Co. Inc. a five-year warrant to purchase up to 113,070 shares of common stock at an exercise price of \$1.80 per share and JMP Securities, LLC a five-year warrant to purchase up to 39,666 shares of common stock at an exercise price of \$1.80 per share. These warrants were not registered under the Securities Act of 1933, as amended, or the securities laws of any state, and were offered and sold in reliance on the exemption from registration afforded by Section 4(2) and Regulation D (Rule 506) under the Securities Act of 1933, as amended, and corresponding provisions of state securities laws, which exempt transactions by an issuer not involving a public offering. Each of Palladium Capital Advisors, LLC, Oppenheimer & Co. Inc. and JMP Securities, LLC was an accredited investor (as defined by Rule 501 under the Securities Act of 1933, as amended) at the time of the private placement.

Item 16. Exhibits and Financial Statement Schedules.

Exhibit No.	Description
2.1	Share Exchange Agreement, dated as of December 29, 2010, by and among InspireMD Ltd., Saguaro Resources, Inc., and the Shareholders of InspireMD Ltd. that are signatory thereto (incorporated by reference to Exhibit 10.1 to Saguaro Resources, Inc. Current Report on Form 8-K filed with the Securities and Exchange Commission on January 5, 2011)
2.2	Amendment to Share Exchange Agreement, dated February 24, 2011 (incorporated by reference to Exhibit 2.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
2.3	Second Amendment to Share Exchange Agreement, dated March 25, 2011 (incorporated by reference to Exhibit 2.3 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 1, 2011)
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 1, 2011)
5.1*	Opinion of Haynes and Boone, LLP.
10.1	Amended and Restated 2011 Umbrella Option Plan (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on November 4, 2011)
10.2	Form of Stock Option Award Agreement (incorporated by reference to Exhibit 10.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)

- 10.3 Agreement of Conveyance, Transfer and Assignment of Assets and Assumption of Obligations, dated as of March 31, 2011 (incorporated by reference to Exhibit 10.3 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.4 Stock Purchase Agreement, by and between InspireMD, Inc. and Lynn Briggs, dated as of March 31, 2011 (incorporated by reference to Exhibit 10.4 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.5 Securities Purchase Agreement, dated as of March 31, 2011, by and among InspireMD, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.5 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.6 Form of \$1.80 Warrant (incorporated by reference to Exhibit 10.6 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.7** Amended and Restated Form of \$1.23 Warrant
- 10.8 \$1,250,000 Convertible Debenture, dated July 20, 2010, by and between InspireMD Ltd. and Genesis Asset Opportunity Fund, L.P. (incorporated by reference to Exhibit 10.8 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.9 Unprotected Leasing Agreement, dated February 22, 2007, by and between Block 7093 Parcel 162 Company Ltd. Private Company 510583156 and InspireMD Ltd. (incorporated by reference to Exhibit 10.9 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.10 Securities Purchase Agreement, dated as of July 22, 2010, by and among InspireMD Ltd. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.10 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.11 Manufacturing Agreement, by and between InspireMD Ltd. and QualiMed Innovative Medizinprodukte GmbH, dated as of September 11, 2007 (incorporated by reference to Exhibit 10.11 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.12 Development Agreement, by and between InspireMD Ltd. and QualiMed Innovative Medizinprodukte GmbH, dated as of January 15, 2007 (incorporated by reference to Exhibit 10.12 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.13 License Agreement, by and between Svelte Medical Systems, Inc. and InspireMD Ltd., dated as of March 19, 2010 (incorporated by reference to Exhibit 10.13 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.14 Agreement, by and between InspireMD Ltd. and Ofir Paz, dated as of April 1, 2005 (incorporated by reference to Exhibit 10.14 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.15 Amendment to the Employment Agreement, by and between InspireMD Ltd. and Ofir Paz, dated as of October 1, 2008 (incorporated by reference to Exhibit 10.15 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)

- 10.16 Second Amendment to the Employment Agreement, by and between InspireMD Ltd. and Ofir Paz, dated as of March 28, 2011 (incorporated by reference to Exhibit 10.16 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.17 Personal Employment Agreement, by and between InspireMD Ltd. and Asher Holzer, dated as of April 1, 2005 (incorporated by reference to Exhibit 10.17 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.18 Amendment to the Employment Agreement, by and between InspireMD Ltd. and Asher Holzer, dated as of March 28, 2011 (incorporated by reference to Exhibit 10.18 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.19 Personal Employment Agreement, by and between InspireMD Ltd. and Eli Bar, dated as of June 26, 2005 (incorporated by reference to Exhibit 10.19 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.20 Employment Agreement, by and between InspireMD Ltd. and Bary Oren, dated as of August 25, 2009 (incorporated by reference to Exhibit 10.20 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.21 Employment Agreement, by and between InspireMD Ltd. and Craig Shore, dated as of November 28, 2010 (incorporated by reference to Exhibit 10.21 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.22 Form of Indemnity Agreement between InspireMD, Inc. and each of the directors and executive officers thereof (incorporated by reference to Exhibit 10.22 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.23 Agreement with Bank Mizrahi Tefahot LTD. for a loan to InspireMD Ltd. in the original principal amount of \$750,000 (incorporated by reference to Exhibit 10.23 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.24 Securities Purchase Agreement, dated as of April 18, 2011, by and among InspireMD, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 22, 2011)
- 10.25 Form of Warrant (incorporated by reference to Exhibit 10.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 22, 2011)
- 10.26 Agreement by and between InspireMD Ltd. and MeKo Laser Material Processing, dated as of April 15, 2010 (incorporated by reference to Exhibit 10.26 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.27 Agreement by and between InspireMD Ltd. and Natec Medical Ltd, dated as of September 23, 2009 (incorporated by reference to Exhibit 10.27 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.28 Exclusive Distribution Agreement by and between InspireMD Ltd. and Hand-Prod Sp. Z o.o, dated as of December 10, 2007 (incorporated by reference to Exhibit 10.28 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.29 Factoring Agreement by and between InspireMD Ltd. and Bank Mizrahi Tefahot Ltd., dated as of February 22, 2011 (incorporated by reference to Exhibit 10.29 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)

- 10.30 \$1.50 Nonqualified Stock Option Agreement, dated as of July 11, 2011, by and between InspireMD, Inc. and Sol J. Barer, Ph.D. (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on July 15, 2011)
- 10.31 Consultancy Agreement, dated as of April 1, 2011, by and between InspireMD Ltd. and Ofir Paz (incorporated by reference to Exhibit 10.34 to Amendment No. 2 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on September 21, 2011)
- 10.32 Consultancy Agreement, dated as of April 29, 2011, by and between InspireMD Ltd. and Asher Holzer (incorporated by reference to Exhibit 10.35 to Amendment No. 2 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on September 21, 2011)
- 10.33 Exclusive Distribution Agreement by and between InspireMD GmbH. and IZASA Distribuciones Tecnicas SA, dated as of May 20, 2009 (incorporated by reference to Exhibit 10.26 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.34 Amendment to the Distribution Agreement by and between InspireMD GmbH. and IZASA Distribuciones Tecnicas SA, dated as of February 2011 (incorporated by reference to Exhibit 10.37 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.35 Exclusive Distribution Agreement by and between InspireMD Ltd. and Tzamal-Jacobsohn Ltd., dated as of December 24, 2008 (incorporated by reference to Exhibit 10.38 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.36 Exclusive Distribution Agreement by and between InspireMD Ltd. and Kirloskar Technologies (P) Ltd., dated as of May 13, 2010 (incorporated by reference to Exhibit 10.39 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.37 Consultancy Agreement by and between InspireMD Ltd. and Sara Paz, dated as of May 6, 2008 (incorporated by reference to Exhibit 10.40 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.38 Consultancy Agreement by and between InspireMD Ltd. and Sara Paz Management and Marketing Ltd., dated as of September 1, 2011 (incorporated by reference to Exhibit 10.41 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.39 Clinical Trial Services Agreement, dated as of October 4, 2011, by and between InspireMD Ltd. and Harvard Clinical Research Institute, Inc. (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on October 11, 2011)
- 10.40 Letter Agreement by and between InspireMD Ltd. and Tzamal-Jacobsohn Ltd., dated as of May 9, 2011 (incorporated by reference to Exhibit 10.43 to Amendment No. 4 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on December 1, 2011)
- 10.41 Stock Award Agreement, dated as of November 16, 2011, by and between InspireMD, Inc. and Sol J. Barer, Ph.D. (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on November 18, 2011)
- 10.42 Nonqualified Stock Option Agreement, dated as of November 16, 2011, by and between InspireMD, Inc. and Sol J. Barer, Ph.D. (incorporated by reference to Exhibit 10.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on November 18, 2011)

- 10.43 Amendment No. 1 to Securities Purchase Agreement, dated as of June 21, 2011, by and among InspireMD, Inc. and the purchasers that are signatory thereto (incorporated by reference to Exhibit 10.43 to Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 13, 2012)
- 10.44 Amendment No. 2 to Securities Purchase Agreement, dated as of November 14, 2011, by and among InspireMD, Inc. and the purchasers that are signatory thereto (incorporated by reference to Exhibit 10.44 to Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 13, 2012)
- 10.45 Consultancy Agreement, dated March 27, 2012, by and between InspireMD Ltd. and Robert Ratini (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 2, 2012)
- 10.46 Securities Purchase Agreement, dated April 5, 2012, by and between InspireMD, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.47 Form of Senior Secured Convertible Note issued April 5, 2012 (incorporated by reference to Exhibit 10.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.48 Form of April 2012 \$1.80 Warrant (incorporated by reference to Exhibit 10.3 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.49 Registration Rights Agreement, dated April 5, 2012, by and between InspireMD, Inc. and the purchasers set forth therein (incorporated by reference to Exhibit 10.4 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.50 Security Agreement, dated April 5, 2012, by and between the Company, InspireMD Ltd., Inspire MD GmbH and certain purchasers set forth therein (incorporated by reference to Exhibit 10.5 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.51 Intellectual Property Security Agreement, dated April 5, 2012, by and between InspireMD, Inc., InspireMD Ltd., Inspire MD GmbH and certain purchasers set forth therein (incorporated by reference to Exhibit 10.6 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.52 Deposit Account Control Agreement, dated April 5, 2012, among InspireMD, Inc., Bank Leumi USA and certain purchasers set forth therein (incorporated by reference to Exhibit 10.7 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.53 Subsidiary Guarantee, dated April 5, 2012, by InspireMD Ltd. and Inspire MD GmbH, in favor of certain purchasers set forth therein (incorporated by reference to Exhibit 10.8 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.54 Fixed and Floating Charge Debenture, dated April 5, 2012, by and between InspireMD Ltd. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.9 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.55 Form of Lock-Up Agreement (incorporated by reference to Exhibit 10.10 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)

- 21.1 List of Subsidiaries (incorporated by reference to Exhibit 21.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 23.1** Consent of Kesselman & Kesselman, Certified Public Accountants
- 23.2* Consent of Haynes and Boone, LLP (included in Exhibit 5.1)
- 24.1** Power of Attorney (included on signature page).
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* Filed herewith.

** Previously filed.

Item 17. Undertakings.

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:

(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 the 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 Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 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 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 the 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 that remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability of the undersigned registrant under the Securities Act to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant 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, the undersigned registrant 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 the undersigned registrant relating to the offering required to be filed pursuant to Rule 424 (§ 230.424 of this chapter);

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

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

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

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 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.

For the purpose of determining liability under the Securities Act to any purchaser, 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 (§ 230.430A of this chapter), 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.



SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Tel Aviv, State of Israel on May 25, 2012.

By: /s/ Ofir Paz
Name: Ofir Paz
Title: Chief Executive Officer

In accordance with 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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Ofir Paz</u> Ofir Paz	Chief Executive Officer and Director (principal executive officer)	May 25, 2012
* <u>Asher Holzer</u>	President and Director	May 25, 2012
<u>/s/ Craig Shore</u> Craig Shore	Chief Financial Officer, Secretary and Treasurer (principal financial and accounting officer)	May 25, 2012
* <u>Sol J. Barer</u>	Chairman of the Board of Directors	May 25, 2012
* <u>Paul Stuka</u>	Director	May 25, 2012
<u>/s/ Eyal Weinstein</u> Eyal Weinstein	Director	May 25, 2012
* <u>James Barry</u>	Director	May 25, 2012

*By: /s/ Ofir Paz
Ofir Paz
Attorney-in-fact

EXHIBIT INDEX

Exhibit No.	Description
2.1	Share Exchange Agreement, dated as of December 29, 2010, by and among InspireMD Ltd., Saguaro Resources, Inc., and the Shareholders of InspireMD Ltd. that are signatory thereto (incorporated by reference to Exhibit 10.1 to Saguaro Resources, Inc. Current Report on Form 8-K filed with the Securities and Exchange Commission on January 5, 2011)
2.2	Amendment to Share Exchange Agreement, dated February 24, 2011 (incorporated by reference to Exhibit 2.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
2.3	Second Amendment to Share Exchange Agreement, dated March 25, 2011 (incorporated by reference to Exhibit 2.3 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 1, 2011)
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 1, 2011)
5.1*	Opinion of Haynes and Boone, LLP.
10.1	Amended and Restated 2011 Umbrella Option Plan (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on November 4, 2011)
10.2	Form of Stock Option Award Agreement (incorporated by reference to Exhibit 10.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
10.3	Agreement of Conveyance, Transfer and Assignment of Assets and Assumption of Obligations, dated as of March 31, 2011 (incorporated by reference to Exhibit 10.3 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
10.4	Stock Purchase Agreement, by and between InspireMD, Inc. and Lynn Briggs, dated as of March 31, 2011 (incorporated by reference to Exhibit 10.4 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
10.5	Securities Purchase Agreement, dated as of March 31, 2011, by and among InspireMD, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.5 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
10.6	Form of \$1.80 Warrant (incorporated by reference to Exhibit 10.6 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
10.7**	Amended and Restated Form of \$1.23 Warrant
10.8	\$1,250,000 Convertible Debenture, dated July 20, 2010, by and between InspireMD Ltd. and Genesis Asset Opportunity Fund, L.P. (incorporated by reference to Exhibit 10.8 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
10.9	Unprotected Leasing Agreement, dated February 22, 2007, by and between Block 7093 Parcel 162 Company Ltd. Private Company 510583156 and InspireMD Ltd. (incorporated by reference to Exhibit 10.9 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)

- 10.10 Securities Purchase Agreement, dated as of July 22, 2010, by and among InspireMD Ltd. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.10 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.11 Manufacturing Agreement, by and between InspireMD Ltd. and QualiMed Innovative Medizinprodukte GmbH, dated as of September 11, 2007 (incorporated by reference to Exhibit 10.11 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.12 Development Agreement, by and between InspireMD Ltd. and QualiMed Innovative Medizinprodukte GmbH, dated as of January 15, 2007 (incorporated by reference to Exhibit 10.12 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.13 License Agreement, by and between Svelte Medical Systems, Inc. and InspireMD Ltd., dated as of March 19, 2010 (incorporated by reference to Exhibit 10.13 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.14 Agreement, by and between InspireMD Ltd. and Ofir Paz, dated as of April 1, 2005 (incorporated by reference to Exhibit 10.14 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.15 Amendment to the Employment Agreement, by and between InspireMD Ltd. and Ofir Paz, dated as of October 1, 2008 (incorporated by reference to Exhibit 10.15 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.16 Second Amendment to the Employment Agreement, by and between InspireMD Ltd. and Ofir Paz, dated as of March 28, 2011 (incorporated by reference to Exhibit 10.16 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.17 Personal Employment Agreement, by and between InspireMD Ltd. and Asher Holzer, dated as of April 1, 2005 (incorporated by reference to Exhibit 10.17 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.18 Amendment to the Employment Agreement, by and between InspireMD Ltd. and Asher Holzer, dated as of March 28, 2011 (incorporated by reference to Exhibit 10.18 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.19 Personal Employment Agreement, by and between InspireMD Ltd. and Eli Bar, dated as of June 26, 2005 (incorporated by reference to Exhibit 10.19 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.20 Employment Agreement, by and between InspireMD Ltd. and Bary Oren, dated as of August 25, 2009 (incorporated by reference to Exhibit 10.20 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.21 Employment Agreement, by and between InspireMD Ltd. and Craig Shore, dated as of November 28, 2010 (incorporated by reference to Exhibit 10.21 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.22 Form of Indemnity Agreement between InspireMD, Inc. and each of the directors and executive officers thereof (incorporated by reference to Exhibit 10.22 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)

- 10.23 Agreement with Bank Mizrahi Tefahot LTD. for a loan to InspireMD Ltd. in the original principal amount of \$750,000 (incorporated by reference to Exhibit 10.23 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2011)
- 10.24 Securities Purchase Agreement, dated as of April 18, 2011, by and among InspireMD, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 22, 2011)
- 10.25 Form of Warrant (incorporated by reference to Exhibit 10.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 22, 2011)
- 10.26 Agreement by and between InspireMD Ltd. and MeKo Laser Material Processing, dated as of April 15, 2010 (incorporated by reference to Exhibit 10.26 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.27 Agreement by and between InspireMD Ltd. and Natec Medical Ltd, dated as of September 23, 2009 (incorporated by reference to Exhibit 10.27 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.28 Exclusive Distribution Agreement by and between InspireMD Ltd. and Hand-Prod Sp. Z o.o, dated as of December 10, 2007 (incorporated by reference to Exhibit 10.28 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.29 Factoring Agreement by and between InspireMD Ltd. and Bank Mizrahi Tefahot Ltd., dated as of February 22, 2011 (incorporated by reference to Exhibit 10.29 to Amendment No. 1 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on August 26, 2011)
- 10.30 \$1.50 Nonqualified Stock Option Agreement, dated as of July 11, 2011, by and between InspireMD, Inc. and Sol J. Barer, Ph.D. (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on July 15, 2011)
- 10.31 Consultancy Agreement, dated as of April 1, 2011, by and between InspireMD Ltd. and Ofir Paz (incorporated by reference to Exhibit 10.34 to Amendment No. 2 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on September 21, 2011)
- 10.32 Consultancy Agreement, dated as of April 29, 2011, by and between InspireMD Ltd. and Asher Holzer (incorporated by reference to Exhibit 10.35 to Amendment No. 2 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on September 21, 2011)
- 10.33 Exclusive Distribution Agreement by and between InspireMD GmbH. and IZASA Distribuciones Tecnicas SA, dated as of May 20, 2009 (incorporated by reference to Exhibit 10.26 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.34 Amendment to the Distribution Agreement by and between InspireMD GmbH. and IZASA Distribuciones Tecnicas SA, dated as of February 2011 (incorporated by reference to Exhibit 10.37 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.35 Exclusive Distribution Agreement by and between InspireMD Ltd. and Tzamal-Jacobsohn Ltd., dated as of December 24, 2008 (incorporated by reference to Exhibit 10.38 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)

- 10.36 Exclusive Distribution Agreement by and between InspireMD Ltd. and Kirloskar Technologies (P) Ltd., dated as of May 13, 2010 (incorporated by reference to Exhibit 10.39 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.37 Consultancy Agreement by and between InspireMD Ltd. and Sara Paz, dated as of May 6, 2008 (incorporated by reference to Exhibit 10.40 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.38 Consultancy Agreement by and between InspireMD Ltd. and Sara Paz Management and Marketing Ltd., dated as of September 1, 2011 (incorporated by reference to Exhibit 10.41 to Amendment No. 3 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on October 12, 2011)
- 10.39 Clinical Trial Services Agreement, dated as of October 4, 2011, by and between InspireMD Ltd. and Harvard Clinical Research Institute, Inc. (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on October 11, 2011)
- 10.40 Letter Agreement by and between InspireMD Ltd. and Tzamal-Jacobsohn Ltd., dated as of May 9, 2011 (incorporated by reference to Exhibit 10.43 to Amendment No. 4 to Registration Statement on Form S-1 filed with the Securities and Exchange Commission on December 1, 2011)
- 10.41 Stock Award Agreement, dated as of November 16, 2011, by and between InspireMD, Inc. and Sol J. Barer, Ph.D. (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on November 18, 2011)
- 10.42 Nonqualified Stock Option Agreement, dated as of November 16, 2011, by and between InspireMD, Inc. and Sol J. Barer, Ph.D. (incorporated by reference to Exhibit 10.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on November 18, 2011)
- 10.43 Amendment No. 1 to Securities Purchase Agreement, dated as of June 21, 2011, by and among InspireMD, Inc. and the purchasers that are signatory thereto (incorporated by reference to Exhibit 10.43 to Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 13, 2012)
- 10.44 Amendment No. 2 to Securities Purchase Agreement, dated as of November 14, 2011, by and among InspireMD, Inc. and the purchasers that are signatory thereto (incorporated by reference to Exhibit 10.44 to Annual Report on Form 10-K filed with the Securities and Exchange Commission on March 13, 2012)
- 10.45 Consultancy Agreement, dated March 27, 2012, by and between InspireMD Ltd. and Robert Ratini (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 2, 2012)
- 10.46 Securities Purchase Agreement, dated April 5, 2012, by and between InspireMD, Inc. and certain purchasers set forth therein (incorporated by reference to Exhibit 10.1 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.47 Form of Senior Secured Convertible Note issued April 5, 2012 (incorporated by reference to Exhibit 10.2 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.48 Form of April 2012 \$1.80 Warrant (incorporated by reference to Exhibit 10.3 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)

- 10.49 Registration Rights Agreement, dated April 5, 2012, by and between InspireMD, Inc. and the purchasers set forth therein (incorporated by reference to Exhibit 10.4 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.50 Security Agreement, dated April 5, 2012, by and between the Company, InspireMD Ltd., Inspire MD GmbH and certain purchasers set forth therein (incorporated by reference to Exhibit 10.5 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.51 Intellectual Property Security Agreement, dated April 5, 2012, by and between InspireMD, Inc., InspireMD Ltd., Inspire MD GmbH and certain purchasers set forth therein (incorporated by reference to Exhibit 10.6 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
- 10.52 Deposit Account Control Agreement, dated April 5, 2012, among InspireMD, Inc., Bank Leumi USA and certain purchasers set forth therein (incorporated by reference to Exhibit 10.7 to Current Report on Form 8-K filed with the Securities and Exchange Commission on April 6, 2012)
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- 23.1** Consent of Kesselman & Kesselman, Certified Public Accountants
- 23.2* Consent of Haynes and Boone, LLP (included in Exhibit 5.1)
- 24.1** Power of Attorney (included on signature page).

* Filed herewith.

** Previously filed.

May 25, 2012

InspireMD, Inc.
4 Menorat Hamaor St.
Tel-Aviv 67448, Israel

Re: InspireMD, Inc. Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to InspireMD, Inc., a Delaware corporation (the “Company”), in connection with the proposed registration of 18,584,517 shares of common stock of the Company, par value \$0.0001 per share (the “Common Stock”), comprised of 10,961,417 shares of Common Stock (the “Warrant Shares”) issuable upon the exercise of warrants (the “Warrants”) and 7,623,100 shares of Common Stock (the “Debenture Shares”) issuable upon the conversion of senior secured convertible debentures (the “Debentures”), pursuant to a registration statement on Form S-1 under the Securities Act of 1933, as amended (the “Securities Act”), originally filed with the Securities and Exchange Commission (the “Commission”) on May 17, 2012 (Registration No. 333-181502), as amended to date (the “Registration Statement”). This opinion is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or Prospectus, other than as expressly stated herein with respect to the validity of the Warrant Shares and the Debenture Shares.

The opinions expressed herein are limited exclusively to the General Corporation Law of the State of Delaware (the “DGCL”) and applicable provisions of the Delaware Constitution and reported judicial decisions interpreting the DGCL and such provisions of the Delaware Constitution and we have not considered, and express no opinion on, any other laws or the laws of any other jurisdiction.

In rendering the opinions expressed herein, we have examined and relied upon the originals, or copies certified to our satisfaction, of (i) the Registration Statement, including the prospectus, and all exhibits thereto; (ii) the Company’s Certificate of Incorporation and any amendments to date certified by the Secretary of State of the State of Delaware; (iii) the Company’s By-laws and any amendments to date certified by the Secretary of the Company; (iv) the minutes and records of the corporate proceedings of the Company with respect to the authorization of the issuance of the Warrant Shares and the Debenture Shares covered by the Registration Statement and related matters thereto; (v) the Warrants; (vi) the Debentures; (vii) a specimen of the Company’s Common Stock certificate; and (viii) such other records, documents and instruments as we have deemed necessary for the expression of the opinions stated herein.

In making the foregoing examinations, we have assumed the genuineness of all signatures (other than those of the Company), the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies thereof and the authenticity of the originals of such latter documents. As to all questions of fact material to these opinions, where such facts have not been independently established, and as to the content and form of certain minutes, records, resolutions or other documents or writings of the Company, we have relied, to the extent we have deemed reasonably appropriate, upon representations or certificates of officers of the Company or governmental officials.

Based upon the foregoing and subject to the assumptions and qualifications stated herein, we are of the opinion that:

1. The Warrant Shares have been duly authorized for issuance by all necessary corporate action of the Company and, when issued and paid for in accordance with the terms and conditions of the Warrants, the Warrant Shares will be validly issued, fully paid and non-assessable.
2. The Debenture Shares have been duly authorized for issuance by all necessary corporate action of the Company and, when issued and paid for in accordance with the terms and conditions of the Debentures, the Debenture Shares will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion with the Commission as Exhibit 5.1 to the Registration Statement and to the reference to our firm under the caption "Legal Matters" in the prospectus constituting part of such Registration Statement. In giving such consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act. This opinion is given as of the date hereof and we assume no obligation to update or supplement such opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes that may hereafter occur.

Very truly yours,

/s/ Haynes and Boone, LLP

Haynes and Boone, LLP