



Non-accelerated filer

company

Smaller reporting

(Do not check if a smaller reporting company)

#### CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per share (2)	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, par value \$0.01 per share	3,000,000 shares	\$12.10	\$ 36,300,000	\$ 4,214.43

(1) Pursuant to Section 416(a) of the Securities Act of 1933, as amended, this registration statement shall also cover any additional shares of Common Stock which become issuable under the Amended and Restated 2000 Stock Incentive Plan by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration which results in an increase in the number of the outstanding shares of Common Stock of Insmmed Incorporated.

(2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) and 457(h) of the Securities Act of 1933, as amended. The price per share and aggregate offering price are calculated on the basis of the average of the high and low prices of the Registrant's Common Stock on the Nasdaq Capital Market on July 11, 2011, in accordance with Rule 457(c) under the Securities Act of 1933, as amended.

## EXPLANATORY NOTE

Insmed Incorporated (sometimes referred to herein as “we,” “our” or the “Registrant”) conducted an annual meeting of its shareholders on May 18, 2010, at which our shareholders ratified an amendment to our Amended and Restated 2000 Incentive Stock Plan, as amended (the “Plan”), increasing the maximum number of shares of common stock reserved under the Plan by 3,000,000 shares to 3,925,000 shares. The securities subject to this Registration Statement are of the same class of the Registrant for which the Registrant previously filed Registration Statements on Form S-8 under the Securities Act of 1933, as amended (the “Securities Act”). Accordingly, the contents of the Registrant’s Registration Statement on Form S-8, File No. 333-87878, as filed with the Securities and Exchange Commission (the “Commission”) on June 13, 2000, on Form S-8, File No. 333-39200, as filed with the Commission on May 9, 2002, and on Form S-8, File No. 333-129479, as filed with the Commission on November 4, 2005, are hereby incorporated by reference pursuant to General Instruction E to Form S-8.

### PART I. INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The information specified by Items 1 and 2 of Part I of Form S-8 is omitted from this filing in accordance with the provisions of Rule 428 of the Securities Act, and the introductory Note to Part I of Form S-8.

The documents containing the information specified in Part I of Form S-8 will be sent or given to participating employees as specified by Rule 428(b) of the Securities Act. Such documents and the documents incorporated by reference herein pursuant to Item 3 of Part II hereof, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

### PART II. INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

#### Item 3. Incorporation of Documents by Reference.

The Registrant is subject to the informational and reporting requirements of Sections 13(a), 14, and 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and in accordance therewith files reports, proxy statements and other information with the Commission. The following documents, which are on file with the Commission, are incorporated in this Registration Statement by reference:

- (a) The Registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2010, as filed with the Commission on March 16, 2011;
- (b) The Registrant’s Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2011, as filed with the Commission on May 10, 2011;
- (c) The Registrant’s Current Reports on Form 8-K for events occurring since the end of the fiscal year ended December 31, 2010, as filed with the Commission on January 14, 2011; February 1, 2011; February 17, 2011; March 1, 2011; March 2, 2011; March 3, 2011; March 10, 2011; March 21, 2011; March 29, 2011; May 10, 2011; May 11, 2011; May 23, 2011; June 13, 2011 and June 28, 2011, respectively; and
- (d) The description of the Registrant’s common stock contained in the Registrant’s Registration Statement on Form 8-A, filed on June 1, 2000, and all amendments and reports updating such description.

In addition, all documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered hereby have

been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of the filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

The Virginia Stock Corporation Act (the "VSCA") permits, and the Registrant's Articles of Incorporation require, indemnification of the Registrant's directors and officers in a variety of circumstances, which may include indemnification for liabilities under the Securities Act. Under Sections 13.1-697 and 13.1-702 of the VSCA, a Virginia corporation is generally authorized to indemnify its directors and officers in civil or criminal actions if they acted in good faith and believed their conduct to be in the best interests of the corporation and, in the case of criminal actions, had no reasonable cause to believe that the conduct was unlawful. The Registrant's Articles of Incorporation require indemnification of directors and officers with respect to certain liabilities, expenses and other amounts imposed upon them because of having been a director or officer, except in the case of willful misconduct or a knowing violation of criminal law.

In addition, the Registrant carries insurance on behalf of directors, officers, employees or agents that may cover liabilities under the Securities Act. The Registrant's Articles of Incorporation also provide that, to the full extent the VSCA (as it presently exists or may hereafter be amended) permits the limitation or elimination of the liability of directors and officers, no director or officer of the Registrant shall be liable to the Registrant or its shareholders for monetary damages with respect to any transaction, occurrence or course of conduct. Section 13.1-692.1 of the VSCA presently permits the elimination of liability of directors and officers in any proceeding brought by or in the right of a company or brought by or on behalf of shareholders of a company, except for liability resulting from such person's having engaged in willful misconduct or a knowing violation of the criminal law or any federal or state securities law, including, without limitation, any unlawful insider trading or manipulation of the market for any security. Sections 13.1-692.1 and 13.1-696 to -704 of the VSCA are hereby incorporated by reference herein.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

A list of exhibits filed with this registration statement is contained in the exhibit index, which is incorporated by reference herein.

Item 9. Undertakings.

1. Item 512(a) of Regulation S-K. 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; 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;

provided, however, that paragraphs (i) and (ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

2. Item 512(b) of Regulation S-K. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 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.

3. Item 512(h) of Regulation S-K. 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 Commission 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 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 Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Monmouth Junction, State of New Jersey, on this 13th day of July, 2011.

INSMED INCORPORATED

By: /s/ Kevin P. Tully C.G.A.  
 Kevin P. Tully C.G.A.  
 Executive Vice President & Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Timothy Whitten and Kevin P. Tully and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including pre-and post-effective amendments) to this Registration Statement and any additional registration statement pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each of said attorneys-in-fact and agents or their substitutes may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ Timothy Whitten Timothy Whitten	President, Chief Executive Officer and Director (Principal Executive Officer)	July 13, 2011
/s/ Kevin P. Tully Kevin P. Tully	Chief Financial Officer (Principal Financial Officer, Principal Accounting Officer)	July 13, 2011
/s/ Donald Hayden, Jr. Donald Hayden, Jr.	Chairman of the Board, Director	July 13, 2011
/s/ Steinar J. Engelsen Steinar J. Engelsen, M.D.	Director	July 13, 2011
/s/ Richard S. Kollender Richard S. Kollender	Director	July 13, 2011

/s/ Melvin Sharoky  
Melvin Sharoky, M.D.

Director

July 13, 2011

/s/ Randall W. Whitcomb  
Randall W. Whitcomb, M.D.

Director

July 13, 2011

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EXHIBIT INDEX

No.	Description
4.1	Instruments Defining Rights of Stockholders. Reference is made to Registrant's registration statement No. 000-30739 on Form 8-A/A which is incorporated herein by reference pursuant to Item 3(d) of this registration statement.
4.2	Rights Agreement, dated as of May 16, 2001, between the Registrant and First Union National Bank, as Rights Agent (which includes as (i) Exhibit A the form of Articles of Amendment to the Registrant's Articles of Incorporation, as amended, (ii) Exhibit B the form of Rights Certificate, and (iii) Exhibit C the Summary of the Rights to Purchase Preferred Stock) (previously filed as Exhibit 4.4 to the Registrant's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on May 17, 2001 and incorporated herein by reference).
4.3	Form of Rights Certificate (previously filed as Exhibit B to the Rights Agreement, dated as of May 16, 2001, between the Registrant and First Union National Bank, as Rights Agent, filed as Exhibit 4.4 to the Registrant's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on May 17, 2001 and incorporated herein by reference).
4.4	Form of Warrant issued by the Registrant to each of the investors in July 2003 private placement of common stock and warrants to purchase common stock (previously filed as Exhibit 4.7 to the Registrant's Registration Statement on Form S-3 (Registration No. 333-107308) on July 24, 2003 and incorporated herein by reference).
4.5	Form of Stock and Warrant Purchase Agreement by and between the Registrant and each of the investors in the November 2004 private placement of common stock and warrants to purchase common stock (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on November 10, 2004 and incorporated herein by reference).
4.6	Form of Warrant issued by the Registrant to each of the investors in November 2004 private placement of common stock and warrants to purchase common stock (previously filed as Exhibit B to the Form of Stock and Warrant Purchase Agreement by and between Insmmed Incorporated and each of the investors previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on November 10, 2004 and incorporated herein by reference).
4.7	Form of Purchase Agreement dated March 15, 2005 between the Registrant and each of the investors in the March 2005 private placement of notes and warrants to purchase common stock (previously filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on March 16, 2005 and incorporated herein by reference).
4.8	Form of 5.5% Note Due 2008-2010 dated March 15, 2005 between the Registrant and each of the investors in the March 2005 private placement of notes and warrants to purchase common stock (previously filed as Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on March 16, 2005 and incorporated herein by reference).

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- 4.9 Form of Warrant dated March 15, 2005 between the Registrant and each of the investors in the March 2005 private placement of notes and warrants to purchase common stock (previously filed as Exhibit 4.3 to the Registrant's Current Report on Form 8-K filed on March 16, 2005 and incorporated herein by reference).
  - 4.10 Form of Registration Rights Agreement dated March 15, 2005 between the Registrant and each of the investors in the March 2005 private placement of notes and warrants to purchase common stock (previously filed as Exhibit 4.4 to the Registrant's Current Report on Form 8-K filed on March 16, 2005 and incorporated herein by reference).
  - 4.11 Amendment No. 1 to Rights Agreement dated March 15, 2005 between the Registrant and Wachovia Bank, N.A. (f/k/a First Union National Bank) (previously filed as Exhibit 4.5 to the Registrant's Current Report on Form 8-K filed on March 16, 2005 and incorporated herein by reference).
  - 4.12 Form of Warrant dated May 3, 2007 between the Registrant and each of the investors in the May 2007 private placement of common stock and warrants to purchase common stock (previously filed as Exhibit 4.1 the Registrant's Current Report on Form 8-K filed on May 4, 2007 and incorporated herein by reference).
  - 4.13 Shareholders Agreement, dated December 1, 2010, among the Registrant and each of the listed shareholders (previously filed as Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on December 2, 2010 and incorporated herein by reference).
  - 4.14 Registration Rights Agreement, dated December 1, 2010, among the Registrant and each of the listed shareholders (previously filed as Exhibit 4.2 to the Registrant's Current Report on Form 8-K filed on December 2, 2010 and incorporated herein by reference).
  - 5.1 Opinion of Greenberg Traurig, LLP, counsel to the Registrant.
  - 23.1 Consent of Greenberg Traurig, LLP (included in the opinion filed as Exhibit 5.1).
  - 23.2 Consent of Ernst & Young, LLP, independent registered public accounting firm.
  - 24.1 Power of Attorney (included on signature page).
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