UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

BIOGEN IDEC INC.

(Exact name of registrant as specified in its charter)

DELAWARE
(State or other jurisdiction
of incorporation or organization)

33-0112644 (I.R.S. Employer Identification No.)

14 Cambridge Center Cambridge, Massachusetts 02142

(Address of principal executive offices, including zip code)

BIOGEN IDEC INC. 2008 OMNIBUS EQUITY PLAN

(Full title of the plan)

SUSAN H. ALEXANDER, ESQ.
Executive Vice President, General Counsel and Secretary
Biogen Idec Inc.
14 Cambridge Center
Cambridge, Massachusetts 02142
(617) 679-2000

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

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 \square

Accelerated filer o

Non-accelerated filer o

Smaller reporting company o

(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

| Title of Securities to be | Amount to be | Proposed Maximum | Proposed Maximum | Amount of |
|---|-------------------|-----------------------------|-----------------------------|------------------|
| Registered(1) | Registered(1) | Offering Price Per Share(2) | Aggregate Offering Price(2) | Registration Fee |
| Common Stock, \$.0005 par value per share | 15,000,000 shares | \$62.83 | \$942,450,000 | \$ 37,038.29 |

- (1) Includes associated rights to purchase Series X junior participating preferred stock. The aggregate number of shares to be registered is subject to adjustment by reason of stock splits, stock dividends and other events pursuant to the terms of the Biogen Idec Inc. 2008 Omnibus Equity Plan (the "2008 Plan"), as applicable. Accordingly, pursuant to Rule 416 under the Securities Act of 1933, (the "Securities Act"), this Registration Statement covers, in addition to the number of shares of common stock shown in the table above, an indeterminate number of shares of the Registrant's common stock which may be subject to grant or otherwise issuable by operation of the provisions of the 2008 Plan governing such adjustments.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(h) under the Securities Act. The proposed maximum offering price per share and the proposed maximum aggregate offering price are based upon the average of the high (\$64.67) and low (\$60.99) sales price for Registrant's common stock as reported on the NASDAQ Global Select Market on July 15, 2008.

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PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

Biogen Idec Inc. ("Biogen Idec" or "Registrant"), Commission File Number 000-19311, hereby incorporates the following documents filed with the Securities and Exchange Commission herein by reference:

- (a) Biogen Idec's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, filed on February 14, 2008, as amended by an amendment on Form 10-K/A filed on April 29, 2008;
- (b) Biogen Idec's Quarterly Reports on Form 10-Q for the quarterly period ended March 31, 2008 and June 30, 2008 filed on April 23, 2008 and July 22, 2008, respectively;
- (c) Biogen Idec's Current Reports on Form 8-K filed on January 11, 2008, January 28, 2008, February 15, 2008, February 27, 2008, March 4, 2008, May 29, 2008, May 30, 2008 (with respect to Item 5.02 only) and July 9, 2008;
- (d) The description of Biogen Idec's common stock contained in the Registration Statement on Form 8-B filed on June 2, 1997, including any amendment or report updating such description of the common stock; and
- (e) The description of Biogen Idec's preferred stock purchase rights contained in its Registration Statement on Form 8-A filed on August 1, 1997, as amended by Form 8-A/A filed on July 27, 2001 and Form 8-A/A filed on June 25, 2003, including any other amendment or report updating such description of the preferred stock purchase rights.

All documents subsequently filed by Biogen Idec pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934 ("Exchange Act"), prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be incorporated by reference in this Registration Statement and shall be deemed to be part hereof from the date of filing of such documents. Any statement contained herein or in a document incorporated by reference shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained in this Registration Statement 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 such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Article Ten of Biogen Idec's Amended and Restated Certificate of Incorporation, as amended, provides for the elimination of personal monetary liabilities of directors of Biogen Idec for any breach of their fiduciary duties to the full extent permitted by the General Corporation Law of Delaware (the "GCL"). Section 102(b)(7) of the GCL enables a corporation in its certificate of incorporation to eliminate or limit the personal liability of members of its board of directors to the corporation or its shareholders for monetary damages for breach of fiduciary duty as a director, provided that the corporation shall not eliminate or limit the liability of a director for: (i) breaching his or her duty of loyalty; (ii) failing to act in good faith, engaging in intentional misconduct or knowingly violating the law; (iii) paying an unlawful dividend or approving an illegal stock repurchase; or (iv) obtaining an improper personal benefit.

Section 145 of the GCL provides that a corporation may indemnify directors and officers as well as other employees and agents against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement in connection with specified actions, suits or proceedings, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation — a "derivative action"), if they acted in good faith and in a manner they 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 their conduct was unlawful. A similar standard is applicable in the case of derivative actions, except that indemnification only extends to expenses (including attorneys' fees) actually and reasonably incurred in connection with the defense or settlement of such action, and the statute requires court approval before there can be any indemnification where the person seeking indemnification has been found liable to the corporation. Indemnification provided pursuant to Section 145 is not exclusive of any other rights to which those seeking indemnification may be entitled to under any bylaw, agreement, disinterested director vote, stockholder vote or otherwise.

Biogen Idec's Amended and Restated By-laws provide that Biogen Idec shall provide, to the fullest extent authorized by the GCL, indemnification against all expense, liability and loss reasonably incurred by its directors, officers, or any other person who is or was serving at the request of the corporation as a director, officer, employee or agent of another related entity and shall advance expenses to such persons, in respect of any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was serving in such capacity. In addition, Biogen Idec maintains directors' and officers' liability insurance which insures against certain liabilities that directors or officers of Biogen Idec may incur in such capacities.

Biogen Idec also has in place agreements with certain of its officers and directors which affirm Biogen Idec's obligation to indemnify them to the fullest extent permitted by law and contain various procedural and other provisions which expand the protection afforded by Biogen Idec's by-laws.

Item 7. Exemption From Registration Claimed.

Not applicable.

Item 8. Exhibits.

The exhibits listed on the Exhibit Index immediately preceding such exhibits are filed as part of this Registration Statement.

Item 9. Undertakings.

- (a) The undersigned Registrant hereby undertakes:
 - (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

- (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 a prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) under the Securities Act 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;
- (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 (a)(1)(i) and (a)(1)(ii) above shall 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 Securities and Exchange Commission by the Registrant pursuant to Section 13 or 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 herein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (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.
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions referred to in Item 6 hereof, 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 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 AND POWER OF ATTORNEY

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 Cambridge, Commonwealth of Massachusetts, on July 22, 2008.

BIOGEN IDEC INC.

By: /s/ James C. Mullen

James C. Mullen
Chief Executive Officer and President

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities indicated on July 22, 2008.

Further, we, the undersigned officers and directors of the Registrant hereby severally constitute and appoint James C. Mullen, Paul J. Clancy and Susan H. Alexander and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities as indicated, any and all amendments or supplements to this Registration Statement on Form S-8 of the Registrant, including post-effective amendments to the Registration Statement, and generally to do all such things in connection therewith in our name and on our behalf in our capacities as indicated to enable the Registrant to comply with the provisions of the Securities Act of 1933 and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys or any of them, to any and all amendments.

| Name | Capacity | | |
|---|--|--|--|
| /s/ James C. Mullen James C. Mullen | Director, Chief Executive Officer and President (Principal Executive Officer) | | |
| /s/ Paul J. Clancy PAUL J. CLANCY | Executive Vice President and Chief Financial Officer (Principal Financial Officer) | | |
| /s/ Michael F. MacLean Michael F. MacLean | Senior Vice President, Finance and Chief Accounting Officer (Principal Accounting Officer) | | |
| /s/ Bruce R. Ross Bruce R. Ross | Director and Chairman of the Board of Directors | | |
| Lawrence C. Best | Director | | |

| Name | Capacity |
|--------------------------|----------|
| /s/ Marijn E. Dekkers | Director |
| Marijn E. Dekkers | |
| /s/ Alan B. Glassberg | Director |
| Alan B. Glassberg | |
| /s/ Nancy L. Leaming | Director |
| Nancy L. Leaming | |
| /s/ Robert W. Pangia | Director |
| ROBERT W. PANGIA | |
| /s/ Stelios Papadopoulos | Director |
| Stelios Papadopoulos | |
| /s/ Cecil B. Pickett | Director |
| CECIL B. PICKETT | |
| /s/ Lynn Schenk | Director |
| Lynn Schenk | |
| /s/ Phillip A. Sharp | Director |
| PHILLIP A. SHARP | |
| /s/ William D. Young | Director |
| WILLIAM D. YOUNG | |
| | |

Description

Exhibit*

EXHIBIT INDEX

| 4.1 | Amended and Restated Certificate of Incorporation. Filed as Exhibit 3.1 to Biogen Idec's Annual Report on Form 10-K for the year ended December 31, 2003. |
|--------|--|
| 4.2 | Certificate of Amendment of Amended and Restated Certificate of Incorporation, dated as of May 21, 2001. Filed as Exhibit 3.2 to Biogen Idec's Annual Report on Form 10-K for the year ended December 31, 2003. |
| 4.3 | Certificate Increasing the Number of Authorized Shares of Series X Junior Participating Preferred Stock, dated as of July 26, 2001. Filed as Exhibit 3.3 to Biogen Idec's Annual Report on Form 10-K for the year ended December 31, 2003. |
| 4.4 | Certificate of Amendment of Amended and Restated Certificate of Incorporation, dated as of November 12, 2003. Filed as Exhibit 3.4 to Biogen Idec's Annual Report on Form 10-K for the year ended December 31, 2003. |
| 4.5 | Amended and Restated Bylaws. Filed as Exhibit 3.1 to Biogen Idec's Current Report on Form 8-K filed on October 3, 2005. |
| 4.6 | Amended and Restated Rights Agreement dated as of July 26, 2001 between Biogen Idec and Mellon Investor Services LLC. Filed as Exhibit 4.1 to Biogen Idec's Amendment to Registration Statement on Form 8-A/A filed on July 27, 2001. |
| 4.7 | Amendment No. 1 to Amended and Restated Rights Agreement dated as of June 20, 2003 between Biogen Idec and Mellon Investor Services LLC. Filed as Exhibit 4.1 to Biogen Idec's Current Report on Form 8-K filed on June 23, 2003. |
| 5 + | Opinion of Ropes & Gray LLP. |
| 23.1 + | Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm. |
| 23.2 + | Consent of Ropes & Gray LLP (included in its opinion in Exhibit 5). |
| 24 + | Powers of Attorney (contained in Part II hereof under Signatures and Power of Attorney). |
| 99 | Biogen Idec Inc. 2008 Omnibus Equity Plan. Filed as Appendix A to Biogen Idec's Definitive Proxy Statement on Schedule 14A filed on May 8, 2008. |

^{*} Unless otherwise indicated, exhibits were previously filed with the Securities and Exchange Commission under Commission File Number 000-19311 and are incorporated herein by reference.

⁺ Filed herewith.

July 22, 2008

Biogen Idec Inc. 14 Cambridge Center Cambridge, Massachusetts 02142

Ladies and Gentlemen:

This opinion is furnished to you in connection with a registration statement on Form S-8 (the "Registration Statement"), filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended, for the registration of 15,000,000 shares of Common Stock, \$.0005 par value (the "Shares"), of Biogen Idec Inc., a Delaware corporation (the "Company"). The Shares are issuable under the Company's 2008 Omnibus Equity Plan (the "Plan").

We are familiar with the actions taken by the Company in connection with the adoption of the Plan. For purposes of this opinion, we have examined or relied upon such documents, records, certificates and other instruments as we have deemed necessary. The opinions expressed below are limited to the Delaware General Corporation Law, including applicable provisions of the Delaware Constitution, and the reported cases interpreting those laws.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, when the Shares have been issued and sold and the Company has received the consideration therefore in accordance with the terms of the Plan, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement. Our consent shall not be deemed an admission that we are experts whose consent is required under Section 7 of the Securities Act of 1933.

Very truly yours,

/s/ Ropes & Gray LLP

Ropes & Gray LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated February 14, 2008 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Biogen Idec Inc.'s Annual Report on Form 10-K for the year ended December 31, 2007.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts July 22, 2008