

**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.)

**133 Boston Post Road  
Weston, Massachusetts 02493**  
(Address of principal executive offices, including zip code)

**BIOGEN IDEC INC. 2006 NON-EMPLOYEE DIRECTORS EQUITY PLAN**  
(Full title of the plan)

**SUSAN H. ALEXANDER**  
**Executive Vice President, General Counsel and Secretary**  
**Biogen Idec Inc.**  
**133 Boston Post Road**  
**Weston, Massachusetts 02493**  
**(781) 464-2000**

(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.

Large accelerated filer       Accelerated filer       Non-accelerated filer       Smaller reporting company   
(Do not check if a smaller reporting company)

**CALCULATION OF REGISTRATION FEE**

<i>Title of Securities to be Registered(1)</i>	<i>Amount to be Registered(1)</i>	<i>Proposed Maximum Offering Price Per Share(2)</i>	<i>Proposed Maximum Aggregate Offering Price(2)</i>	<i>Amount of Registration Fee</i>
Common Stock, \$0.0005 par value per share	750,000 shares	\$58.17	\$43,627,500	\$3,111

- (1) 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. 2006 Non-Employee Directors Equity Plan (the "2006 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 2006 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 (\$58.75) and low (\$57.58) sales price for the Registrant's common stock as reported on the NASDAQ Global Select Market on October 21, 2010.

**EXPLANATORY NOTE**

This Registration Statement is being filed to register an additional 750,000 shares of our common stock for issuance under the Biogen Idec Inc. 2006 Non-Employee Directors Equity Plan. Pursuant to General Instruction E to Form S-8, we incorporate by reference into this Registration Statement the entire contents of our Registration Statement on Form S-8 (File No. 333-140817) filed with the Securities and Exchange Commission on February 21, 2007.

**PART II**

**INFORMATION REQUIRED IN THE REGISTRATION STATEMENT**

**Item 8. Exhibits.**

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

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**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 Weston, Commonwealth of Massachusetts, on October 26, 2010.

**BIOGEN IDEC INC.**

By: /s/ GEORGE A. SCANGOS  
George A. Scangos  
Chief Executive Officer

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 October 26, 2010.

Further, we, the undersigned officers and directors of the registrant hereby severally constitute and appoint Susan H. Alexander, Paul J. Clancy and George A. Scangos as 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 this 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.

<u>Name</u>	<u>Capacity</u>
<u>/s/ GEORGE A. SCANGOS</u> GEORGE A. SCANGOS	Chief Executive Officer and Director (Principal Executive Officer)
<u>/s/ PAUL J. CLANCY</u> PAUL J. CLANCY	Executive Vice President and Chief Financial Officer (Principal Financial Officer)
<u>/s/ MICHAEL F. MACLEAN</u> MICHAEL F. MACLEAN	Senior Vice President, Finance and Chief Accounting Officer (Principal Accounting Officer)
<u>/s/ WILLIAM D. YOUNG</u> WILLIAM D. YOUNG	Director and Chairman of the Board of Directors
<u>/s/ ALEXANDER J. DENNER</u> ALEXANDER J. DENNER	Director
<u>/s/ CAROLINE D. DORSA</u> CAROLINE D. DORSA	Director

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Name	Capacity
<u>/s/ NANCY L. LEAMING</u> NANCY L. LEAMING	Director
<u>/s/ RICHARD C. MULLIGAN</u> RICHARD C. MULLIGAN	Director
<u>/s/ ROBERT W. PANGIA</u> ROBERT W. PANGIA	Director
<u>/s/ STELIOS PAPADOPOULOS</u> STELIOS PAPADOPOULOS	Director
<u>/s/ BRIAN S. POSNER</u> BRIAN S. POSNER	Director
<u>/s/ ERIC K. ROWINSKY</u> ERIC K. ROWINSKY	Director
<u>/s/ LYNN SCHENK</u> LYNN SCHENK	Director
<u>/s/ STEPHEN A. SHERWIN</u> STEPHEN A. SHERWIN	Director

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## EXHIBIT INDEX

Exhibit Number*	Description of Exhibit
4.1	Amended and Restated Certificate of Incorporation. Filed as Exhibit 3.1 to our Annual Report on Form 10-K for the year ended December 31, 2003.
4.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation dated May 21, 2001. Filed as Exhibit 3.2 to our 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 July 26, 2001. Filed as Exhibit 3.3 to our Annual Report on Form 10-K for the year ended December 31, 2003.
4.4	Certificate of Amendment to the Amended and Restated Certificate of Incorporation dated November 12, 2003. Filed as Exhibit 3.4 to our Annual Report on Form 10-K for the year ended December 31, 2003.
4.5	Second Amended and Restated Bylaws, as amended. Filed as Exhibit 3.1 to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2010.
5 +	Opinion of Ropes & Gray LLP.
10	2006 Non-Employee Directors Equity Plan, as amended. Filed as Appendix A to our Definitive Proxy Statement on Schedule 14A filed on April 28, 2010.
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).

\* Unless otherwise indicated, exhibits were previously filed with the Securities and Exchange Commission under Commission File Number 0-19311 and are incorporated herein by reference.

+ Filed herewith.

October 26, 2010

Biogen Idec Inc.  
133 Boston Post Road  
Weston, MA 02493

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 750,000 shares of common stock, \$0.0005 par value per share (the "Shares"), of Biogen Idec Inc., a Delaware corporation (the "Company"). The Shares are issuable under the Biogen Idec Inc. 2006 Non-Employee Directors Equity Plan, as amended (the "Plan").

We are familiar with the actions taken by the Company in connection with the adoption of the Plan. For purposes of our opinion, we have examined and 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 the statutory provisions and the reported judicial decisions 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 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.

It is understood that this opinion is to be used only in connection with the offer and sale of Shares while the Registration Statement is in effect.

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 9, 2010 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, 2009.

/s/ PricewaterhouseCoopers LLP  
Boston, Massachusetts  
October 26, 2010