BIOGEN IDEC INC.
Form SC 13G/A
February 14, 2008
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Schedule 13G

Under the Securities Exchange Act of 1934

(Amendment No.:4)*

Name of issuer: BIOGEN IDEC INC

Title of Class of Securities: Common Stock

CUSIP Number: 09062X103

Date of Event Which Requires Filing of this Statement: December 31, 2007

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

(X) Rule 13d-1(b)

( ) Rule 13d-1(c)

( ) Rule 13d-1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

(Continued on the following page(s))

13G

CUSIP No.: 09062X103

1. NAME OF REPORTING PERSON

S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

VANGUARD CHESTER FUNDS - VANGUARD PRIMECAP FUND 23-2311358

2. CHECK THE APPROPRIATE [LINE] IF A MEMBER OF A GROUP

A. B. **X**

3. SEC USE ONLY

4. CITIZENSHIP OF PLACE OF ORGANIZATION

Delaware

(For questions 5-8, report the number of shares beneficially owned by each reporting person with:)

5. SOLE VOTING POWER

17,530,320

6. SHARED VOTING POWER

7. SOLE DISPOSITIVE POWER

8. SHARED DISPOSITIVE POWER

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

17,530,320

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES

N/A

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

4.69%

12. TYPE OF REPORTING PERSON

IV

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13G

Under the Securities Act of 1934

Check the following [line] if a fee is being paid with this statement **N/A**

Item 1(a) - Name of Issuer:

BIOGEN IDEC INC

Item 1(b) - Address of Issuer's Principal Executive Offices:

11011 TORREYANA ROAD

SAN DIEGO, CA 92121

Item 2(a) - Name of Person Filing:

VANGUARD CHESTER FUNDS - VANGUARD PRIMECAP FUND 23-2311358

Item 2(b) Address of Principal Business Office or, if none, residence:

100 Vanguard Blvd.

Malvern, PA 19355

Item 2(c) Citizenship:

Delaware

Item 2(d) - Title of Class of Securities:

Common Stock

Item 2(e) - CUSIP Number

09062X103

Item 3 - Type of Filing:

This statement is being filed pursuant to Rule 13d-1. Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C 80a-8).

Item 4 - Ownership:

(a) Amount Beneficially Owned:

17,530,320

(b) Percent of Class:

4.69%

(c) Number of shares as to which such person has:

(i) sole power to vote or direct to vote: 17,530,320

(ii) shared power to vote or direct to vote:

(iii) sole power to dispose of or to direct the disposition of:

(iv) shared power to dispose or to direct the disposition of:

Item 5 - Ownership of Five Percent or Less of a Class:

Not Applicable

Item 6 - Ownership of More Than Five Percent on Behalf of Another Person:

Not applicable

Item 7 - Identification and Classification of the Subsidiary Which Acquired The Security Being Reported on by the Parent Holding Company:

Not applicable

Item 8 - Identification and Classification of Members of Group:

Not applicable

Item 9 - Notice of Dissolution of Group:

Not applicable

Item 10 - Certification:

By signing below I certify than, to the best of my knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purpose or effect.

Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: 2-14-2008

By /s/ Arthur S. Gabinet

Arthur S. Gabinet

Assistant Secretary