

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

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. ___)

NEUROCRINE BIOSCIENCES, INC.

(Name of Issuer)

COMMON STOCK

(Title of Class of Securities)

64125C109

(CUSIP Number)

DECEMBER 31, 2004

(Date of Event Which Requires Filing of this Statement)

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

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 and 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).

CUSIP No. 64125C109

1. Names of Reporting Persons.
I.R.S. Identification Nos. of above persons (entities only).

American Century Companies, Inc. 43-1325032

2. Check the Appropriate Box if a Member of a Group. (See Instructions)

(a)

(b)

3. SEC Use Only.

4. Citizenship or Place of Organization.

Delaware

Number of 5. Sole Voting Power. 2,236,798

Shares Bene-

ficially Owned 6. Shared Voting Power. 0

by Each

Reporting 7. Sole Dispositive Power. 2,255,578

Person With: -----

8. Shared Dispositive Power. 0

9. Aggregate Amount Beneficially Owned by Each Reporting Person. 2,255,578

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares.
(See Instructions) []

11. Percent of Class Represented by Amount in Row. (9) 6.2%

12. Type of Reporting Person. (See Instructions) HC

CUSIP No. 64125C109

1. Names of Reporting Persons.
I.R.S. Identification Nos. of above persons (entities only).

American Century Investment Management, Inc. 44-0640487

2. Check the Appropriate Box if a Member of a Group. (See Instructions)

(a) []

(b) []

3. SEC Use Only.

4. Citizenship or Place of Organization.

Delaware

Number of 5. Sole Voting Power. 2,236,798

Shares Bene- -----

6. Shared Voting Power. 0

Reporting 7. Sole Dispositive Power. 2,255,578

Person With: -----

8. Shared Dispositive Power. 0

9. Aggregate Amount Beneficially Owned by Each Reporting Person. 2,255,578

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares.
(See Instructions) []

11. Percent of Class Represented by Amount in Row. (9) 6.2%

12. Type of Reporting Person. (See Instructions) IA

CUSIP No. 64125C109

1. Names of Reporting Persons.
I.R.S. Identification Nos. of above persons (entities only).

American Century Mutual Funds, Inc. 44-6006315

2. Check the Appropriate Box if a Member of a Group. (See Instructions)

(a) []

(b) []

3. SEC Use Only.

4. Citizenship or Place of Organization.

Maryland

Number of 5. Sole Voting Power. 2,124,108

Shares Bene-

ficially Owned 6. Shared Voting Power. 0

by Each

Reporting 7. Sole Dispositive Power. 2,124,108

Person With:

8. Shared Dispositive Power. 0

9. Aggregate Amount Beneficially Owned by Each Reporting Person. 2,124,108

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares.
(See Instructions) []

11. Percent of Class Represented by Amount in Row. (9) 5.8%

12. Type of Reporting Person. (See Instructions) IV

Item 1.

(a) Name of Issuer.

Neurocrine Biosciences, Inc.

(b) Address of Issuer's Principal Executive Offices.

12790 El Camino Real
San Diego, CA 92130

Item 2.

(a) Name of Person Filing.

(1) American Century Companies, Inc.

(2) American Century Investment Management, Inc.

(3) American Century Mutual Funds, Inc.

(b) Address of Principal Business Office or, if none, Residence.

4500 Main Street
9th Floor

(c) Citizenship.

- (1) Delaware
- (2) Delaware
- (3) Maryland

(d) Title of Class of Securities.

Reference is made to the cover page of this filing.

(e) CUSIP Number.

Reference is made to the cover page of this filing.

- Item 3.
- (1) American Century Companies, Inc. is a parent holding company or control person in accordance with Section 240.13d-1(b)(1)(ii)(G).
 - (2) American Century Investment Management, Inc. is an investment adviser in accordance with Section 240.13d-1(b)(1)(ii)(E).
 - (3) American Century Mutual Funds, Inc. is an investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8).

Item 4. Ownership.

Reference is made to Items 5-9 and 11 on the cover pages of this filing.

Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following [] .

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

Various persons, including the investment companies and separate institutional investor accounts that American Century Investment Management, Inc. ("ACIM") serves as investment adviser, have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the securities that are the subject of this schedule. Except as may be otherwise indicated if this is a joint filing, not more than 5% of the class of securities that is the subject of this schedule is owned by any one client advised by ACIM.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company.

See attached Exhibit A.

Item 8. Identification and Classification of Members of the Group.

Not applicable.

Item 9. Notice of Dissolution of Group.

Not applicable.

Item 10. Certification.

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

February 11, 2005

AMERICAN CENTURY COMPANIES, INC. ("ACC")

AMERICAN CENTURY INVESTMENT MANAGEMENT, INC. ("ACIM")

AMERICAN CENTURY MUTUAL FUNDS, INC. ("ACMF")

By: /s/ David C. Tucker

David C. Tucker
Senior Vice President, ACIM and ACMF
Vice President and Secretary, ACC

SCHEDULE 13G - TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULE 13d-1(b) or 13d-2(b).

EXHIBIT A

This Exhibit has been prepared to identify each subsidiary of American Century Companies, Inc. ("ACC") that is a beneficial owner of securities that are the subject of this schedule (the "Subject Securities"). American Century Investment Management, Inc. ("ACIM") is a wholly-owned subsidiary of ACC and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940.

SCHEDULE 13G - TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULE 13d-1(b) or 13d-2(b) and Rule 13d-1(f)(1) Agreement.

EXHIBIT B

Rule 13d-1(f)(1)(iii) Agreement

Each of the undersigned hereby agrees and consents to the execution and joint filing on its behalf by American Century Investment Management, Inc. of this Schedule 13G respecting the beneficial ownership of the securities which are the subject of this schedule.

Dated this 11th day of February, 2005.

AMERICAN CENTURY COMPANIES, INC. ("ACC")

AMERICAN CENTURY INVESTMENT MANAGEMENT, INC. ("ACIM")

AMERICAN CENTURY MUTUAL FUNDS, INC. ("ACMF")

By: /s/ David C. Tucker

David C. Tucker
Senior Vice President, ACIM and ACMF

