

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP**

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| OMB APPROVAL                                 |           |
|--|-----------|
| OMB Number:                                  | 3235-0287 |
| Estimated average burden hours per response: | 0.5       |

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|--|---|--|
| 1. Name and Address of Reporting Person*<br><u>BVF PARTNERS L P/IL</u><br><br>_____<br>(Last) (First) (Middle)<br><u>ONE SANSOME STREET, 31ST FLOOR</u><br><br>_____<br>(Street)<br><u>SAN FRANCISCO CA 94104</u><br><br>_____<br>(City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol<br><u>NEUROCRINE BIOSCIENCES INC [ NBIX ]</u> | 5. Relationship of Reporting Person(s) to Issuer<br>(Check all applicable)<br><br>Director <input checked="" type="checkbox"/> 10% Owner<br>Officer (give title below) <input checked="" type="checkbox"/> Other (specify below)<br><u>Indirect Beneficial Owner</u> |
|  | 3. Date of Earliest Transaction (Month/Day/Year)<br><u>05/15/2008</u>                     |  |
|  |   | 4. If Amendment, Date of Original Filed (Month/Day/Year)   |

**Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned**

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) |   | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) |            |          | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|------------|----------|---|--|---|
|                                 |                                      |  | Code                           | V | Amount  | (A) or (D) | Price    |   |  |   |
| Common Stock                    | 05/15/2008                           |  | P                              |   | 32,300 <sup>(3)</sup>   | A          | \$4.6275 | 4,907,400 <sup>(6)</sup>  | I  | See footnotes <sup>(1)(2)</sup>                       |
| Common Stock                    | 05/15/2008                           |  | P                              |   | 21,000 <sup>(4)</sup>   | A          | \$4.6275 | 4,928,400 <sup>(6)</sup>  | I  | See footnotes <sup>(1)(2)</sup>                       |
| Common Stock                    | 05/15/2008                           |  | P                              |   | 73,000 <sup>(5)</sup>   | A          | \$4.6275 | 5,001,400 <sup>(6)</sup>  | I  | See footnotes <sup>(1)(2)</sup>                       |
| Common Stock                    | 05/16/2008                           |  | P                              |   | 7,300 <sup>(3)</sup>  | A          | \$4.6524 | 5,008,700 <sup>(6)</sup>  | I  | See footnotes <sup>(1)(2)</sup>                       |
| Common Stock                    | 05/16/2008                           |  | P                              |   | 4,000 <sup>(4)</sup>  | A          | \$4.6524 | 5,012,700 <sup>(6)</sup>  | I  | See footnotes <sup>(1)(2)</sup>                       |
| Common Stock                    | 05/16/2008                           |  | P                              |   | 15,000 <sup>(5)</sup>   | A          | \$4.6524 | 5,027,700 <sup>(6)</sup>  | I  | See footnotes <sup>(1)(2)</sup>                       |

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) |   | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |     | 6. Date Exercisable and Expiration Date (Month/Day/Year) |                 | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|--------------------------------------|--|--------------------------------|---|--|-----|--|-----------------|---|--|--|---|--|
|  |  |                                      |  | Code                           | V | (A)  | (D) | Date Exercisable   | Expiration Date |   |  |  |   |  |

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| 1. Name and Address of Reporting Person*<br><u>BVF PARTNERS L P/IL</u><br><br>_____<br>(Last) (First) (Middle)<br><u>ONE SANSOME STREET, 31ST FLOOR</u><br><br>_____<br>(Street)<br><u>SAN FRANCISCO CA 94104</u><br><br>_____<br>(City) (State) (Zip) |
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| 1. Name and Address of Reporting Person*<br><u>BIOTECHNOLOGY VALUE FUND L P</u><br><br>_____<br>(Last) (First) (Middle)<br><u>900 N. MICHIGAN AVE., SUITE 1100</u> |
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(Street)  
**CHICAGO IL 60611**

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(City) (State) (Zip)

1. Name and Address of Reporting Person\*  
**BIOTECHNOLOGY VALUE FUND II LP**

(Last) (First) (Middle)  
**900 N. MICHIGAN AVE., SUITE 1100**

(Street)  
**CHICAGO IL 60611**

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(City) (State) (Zip)

1. Name and Address of Reporting Person\*  
**BVF INVESTMENTS LLC**

(Last) (First) (Middle)  
**900 N. MICHIGAN AVE., SUITE 1100**

(Street)  
**CHICAGO IL 60611**

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(City) (State) (Zip)

1. Name and Address of Reporting Person\*  
**BVF INC/IL**

(Last) (First) (Middle)  
**ONE SANSOME STREET, 31ST FLOOR**

(Street)  
**SAN FRANCISCO CA 94104**

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(City) (State) (Zip)

**Explanation of Responses:**

1. The shares reported in this response are indirectly beneficially owned by BVF Partners L.P., a Delaware limited partnership ("Partners"), the designated filer of this joint filing on Form 4, and by its general partner, BVF Inc., a Delaware corporation ("BVF Inc."), which is also an investment advisor to Partners. Partners is the general partner of Biotechnology Value Fund, L.P., a Delaware limited partnership ("BVF, L.P.") and Biotechnology Value Fund II, L.P., a Delaware limited partnership ("BVF2, L.P."), both investment limited partnerships. Partners also is the manager of BVF Investments, L.L.C., a Delaware limited liability company ("Investments"). Pursuant to the operating agreement of Investments, Partners is authorized, among other things, to invest the funds of Ziff Asset Management, L.P., the majority member of Investments, in the shares of Common Stock reported in Table I as being beneficially owned by Investments.
2. Mark N. Lampert is the sole shareholder and sole director of BVF Inc., and is an officer of BVF Inc. This joint filing on Form 4 shall not be deemed an admission that Mark N. Lampert is, for purposes of Section 16 of the Securities Exchange Act of 1934, as amended, or otherwise, the beneficial owner of any equity securities covered by this joint filing.
3. Shares directly beneficially owned by BVF, L.P.
4. Shares directly beneficially owned by BVF2, L.P.
5. Shares directly beneficially owned by Investments.
6. Total amount of shares indirectly beneficially owned by Partners and BVF Inc.

**Remarks:**

[BVF Partners L.P., By: BVF Inc., its GP, By: /s/ Mark N. Lampert](#) [05/19/2008](#)  
[BIOTECHNOLOGY VALUE FUND, L.P. By: BVF Partners L.P., its GP, By: BVF Inc., By: /s/ Mark N. Lampert](#) [05/19/2008](#)  
[BIOTECHNOLOGY VALUE FUND II, L.P., By: BVF Partners L.P., its GP, By: BVF Inc., By: /s/ Mark N. Lampert](#) [05/19/2008](#)  
[BVF INVESTMENTS, L.L.C., By: BVF Partners L.P., its Manager, By: BVF Inc., By: /s/ Mark N. Lampert](#) [05/19/2008](#)  
[BVF INC., By: /s/ Mark N. Lampert](#) [05/19/2008](#)

\*\* Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

\* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

\*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

