

IDERA PHARMACEUTICALS, INC.
 Form 4/A
 September 30, 2008

FORM 4 UNITED STATES SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549

OMB APPROVAL

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
 Baker Brothers Life Sciences Capital (GP), LLC

2. Issuer Name and Ticker or Trading Symbol
 IDERA PHARMACEUTICALS, INC. [IDP]

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

(Last) (First) (Middle)
 667 MADISON AVENUE, 17TH FLOOR

3. Date of Earliest Transaction (Month/Day/Year)
 07/28/2008

____ Director
 ____ Officer (give title below)
 10% Owner
 ____ Other (specify below)

(Street)
 NEW YORK, NY US 10021

4. If Amendment, Date Original Filed(Month/Day/Year)
 07/30/2008

6. Individual or Joint/Group Filing(Check Applicable Line)
 ____ Form filed by One Reporting Person
 Form filed by More than One Reporting Person

| 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 Ownership (Instr. 4) |
| | | | | (A) or (D) | Price | | |
| Common Stock ⁽¹⁾ ₍₂₎ | 07/28/2008 | | S | 5,901 D | \$ 14.8726 | 437,700 | I Through Partnership ⁽³⁾ |
| Common Stock ⁽¹⁾ ₍₂₎ | 07/29/2008 | | S | 19,670 D | \$ 14.931 | 418,030 | I Through Partnership ⁽³⁾ |

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

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number.

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 Underlying Securities (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of Derivative Securities Beneficially Owned (Instr. 5) |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|--|
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|--|

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|---|---------------|-----------|---------|-------|
| | Director | 10% Owner | Officer | Other |
| Baker Brothers Life Sciences Capital (GP), LLC 667 MADISON AVENUE, 17TH FLOOR NEW YORK, NY US 10021 | | X | | |
| BAKER JULIAN 667 MADISON AVENUE, 17TH FLOOR NEW YORK, NY US 10021 | | X | | |
| BAKER FELIX 667 MADISON AVENUE, 17TH FLOOR NEW YORK, NY US 10021 | | X | | |

Signatures

| | | |
|---|---------------------------------|------------|
| /s/ Julian C. Baker, as Managing Member of Baker Brothers Life Sciences Capital (GP), LLC | | 09/30/2008 |
| | **Signature of Reporting Person | Date |
| /s/ Julian C. Baker | | 09/30/2008 |
| | **Signature of Reporting Person | Date |
| /s/ Felix J. Baker | | 09/30/2008 |
| | **Signature of Reporting Person | Date |

Explanation of Responses:

- * 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).

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(1) In addition to Baker Brothers Life Sciences Capital (GP), LLC, this Form 4 is being filed jointly by Julian C. Baker and Felix J. Baker, each of whom has the same business address as Baker Brothers Life Sciences Capital (GP), LLC and may be deemed to have a pecuniary interest in securities owned by it. Because of certain relationships with other security holders of the Issuer, the Reporting Persons are filing solely for informational purposes as if they were members of a group of such shareholders. (Continued in footnote 2).

(2) However, the Reporting Persons disclaim that they and any other person or persons, in fact constitute a "group" for purposes of Section 13(d)(3) of the Securities Exchange Act of 1934, as amended, or Rule 13d-5 thereunder or that they are the beneficial owners of securities owned by any such other persons, and each of them disclaims beneficial ownership of securities reported herein except to the extent of their pecuniary interest, if any, therein.

(3) Represents securities owned directly by Baker Brothers Life Sciences, L.P., the sole general partner of which is Baker Brothers Life Sciences Capital, L.P., a limited partnership the sole general partner of which is Baker Brothers Life Sciences Capital (GP),LLC. Julian C. Baker and Felix J. Baker are the controlling members of Baker Brothers Life Sciences Capital (GP), LLC.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.