

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

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

OMB APPROVAL

OMB Number: 3235-0287
 Expires: January 31, 2005
 Estimated average burden hours per response... 0.5

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 Bros. 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 ___X___ 10% Owner
 ___ Officer (give title below) ___ 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
 ___X___ 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 Beneficial Ownership (Instr. 4) |
| | | | | (A) or (D) | Price | | |
| Common Stock <u>(1)</u> <u>(2)</u> | 07/28/2008 | | S | 565 <u>(3)</u> D | \$ 14.8726 | 41,962 <u>(4)</u> | I Through Partnership <u>(4)</u> |
| Common Stock <u>(1)</u> <u>(2)</u> | 07/29/2008 | | S | 1,885 <u>(5)</u> D | \$ 14.931 | 40,077 <u>(6)</u> | I Through Partnership <u>(6)</u> |

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

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control

SEC 1474 (9-02)

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. Nu Deriv Secur Bene Own Follo Repo Trans (Instr |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|--|
| | | | | Code V (A) (D) | | Date Exercisable Expiration Date | Title Amount or Number of Shares | | |

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|---|---------------|-----------|---------|-------|
| | Director | 10% Owner | Officer | Other |
| Baker Bros. 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 Bros. 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).

In addition to Baker Bros. Capital (GP), LLC, this Form 4 is being filed jointly by Felix J. Baker and Julian C. Baker, each of whom has the same business address as Baker Bros. Capital (GP), LLC and may be deemed to have a pecuniary interest in securities owned by it.

(1) 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 with 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 owner of securities owned by 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 268 shares sold by Baker Bros. Investments II, L.P. and 297 shares sold by Baker Bros. Investments, L.P.

(4) Represents shares 19,921 shares owned directly by Baker Bros. Investments II, L.P. and 22,041 shares owned directly by Baker Bros. Investments, L.P., limited partnerships of which the sole general partner is Baker Bros. Capital, L.P., a limited partnership of which the sole general partner is Baker Bros. Capital (GP), LLC. Felix J. Baker and Julian C. Baker are controlling members of Baker Bros. Capital (GP), LLC.

(5) Represents 895 shares sold by Baker Bros. Investments II, L.P. and 990 shares sold by Baker Bros. Investments, L.P.

(6) Represents shares 19,026 shares owned directly by Baker Bros. Investments II, L.P. and 21,051 shares owned directly by Baker Bros. Investments, L.P., limited partnerships of which the sole general partner is Baker Bros. Capital, L.P., a limited partnership of which the sole general partner is Baker Bros. Capital (GP), LLC. Felix J. Baker and Julian C. Baker are controlling members of Baker Bros. 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.