

IDERA PHARMACEUTICALS, INC.  
 Form 4  
 April 25, 2012

**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 \*  
 Senator Investment Group LP

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

5. Relationship of Reporting Person(s) to Issuer  
 (Check all applicable)

(Last) (First) (Middle)  
 510 MADISON AVENUE, 28TH FLOOR  
 (Street)

3. Date of Earliest Transaction (Month/Day/Year)  
 04/19/2012

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

NEW YORK, NY 10022

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

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

(City) (State) (Zip)

**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 Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|-----------------------------------|
|                                 |                                      |  |                                | (A) or (D)  | Price   |  |                                   |
| Common Stock                    | 04/23/2012                           |  | S                              | 91,000  | D \$ 1.88   | 2,724,700  | I                                 |
|                                 |                                      |  |                                |   |   |  | See Footnoes (1) (2)              |

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

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

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| 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 Owned Following Transaction (Instr. 6) |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|---|
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|---|

## Reporting Owners

| Reporting Owner Name / Address  | Relationships |           |         |       |
|---|---------------|-----------|---------|-------|
|   | Director      | 10% Owner | Officer | Other |
| Senator Investment Group LP<br>510 MADISON AVENUE<br>28TH FLOOR<br>NEW YORK, NY 10022 |               | X         |         |       |

## Signatures

Evan Gartenlaub, General Counsel 04/25/2012

\*\*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).

(1) The entities and individuals identified in this Form 4 (the "Reporting Persons") disclaim any membership in any "group".

The amount of securities shown in this row is owned by Senator Global Opportunity Master Fund L.P. (the "Master Fund"). As Investment Manager to the Master Fund, Senator Investment Group LP ("Senator LP") may be deemed to be the beneficial owner of the Issuer's securities owned by the Master Fund, but disclaims beneficial ownership to the extent such ownership exceeds its pecuniary interest. Douglas Silverman, a United States citizen, and Alexander Klabin, a United States citizen, have control of a Delaware limited liability company that may be deemed to control Senator LP. Each of Messrs. Silverman and Klabin disclaim beneficial ownership of the shares held by the Master Fund to the extent such beneficial interest exceeds his pecuniary interest.

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.