FORM 4

## **UNITED STATES SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

OMB APPROVAL

OMB Number: 3235-0287
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

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

| 1. Name and Address of Reporting Person*  AGRAWAL SUDHIR  (Last) (First) (Middle)  C/O IDERA PHARMACEUTICALS, INC.  345 VASSAR STREET  (Street)  CAMBRIDGE MA 02139  (City) (State) (Zip) |  |            |                 |    |  | 2. Issuer Name and Ticker or Trading Symbol IDERA PHARMACEUTICALS, INC. [IDP]  3. Date of Earliest Transaction (Month/Day/Year)  12/15/2005  4. If Amendment, Date of Original Filed (Month/Day/Year)  tive Securities Acquired, Disposed of, or Benefi |               |   |   |                |                                       |   |  | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)  X Director 10% Owner  X Officer (give title Other (specify below)  CEO & CSO  6. Individual or Joint/Group Filing (Check Applicable Line)  X Form filed by One Reporting Person Form filed by More than One Reporting Person |  |         |   |  | pplicable   |
|---|--|------------|-----------------|----|--|---|---------------|---|---|----------------|---------------------------------------|---|--|---|--|---------|---|--|---|
| 1. Title of Security (Instr. 3)  2. Transacti Date (Month/Day)  Table II - Deriva   |  |            |                 |    | etion<br>ay/Year)<br>vative S  | ZA. Deemed Execution Date, if any (Month/Day/Year)  |               |   | 3.<br>Transactic<br>Code (Ins<br>8)<br>Code | on<br>tr.<br>V | 4. Secur<br>Dispose<br>and 5)  Amount | ties Acquired (A) or it of (D) (Instr. 3, 4 |  | Sec Ber Ow Fol Re (In:  | 5. Amount of Securities Beneficially Owned Following Reported Transaction (Instr. 3 and            |         | nt of s Forn (D) o Indir  |  | 7. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |
| 1. Title of<br>Derivative<br>Security<br>(Instr. 3)   | ve Conversion Date Execution or Exercise (Month/Day/Year) if any |            | med<br>on Date, | 4. | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |   | ve<br>es<br>d | pate Expiration Date Expiration Date Expiration Date (Month/Day/Year) |   |                |                                       |   | 8. Price<br>of<br>Derivative<br>Security<br>(Instr. 5) |   | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) |         | 10.<br>Ownership<br>Form:<br>Direct (D)<br>or Indirect<br>(I) (Instr.<br>4) | 11. Nature<br>of Indirect<br>Beneficial<br>Ownership<br>(Instr. 4) |   |
| Stock<br>Option<br>(right to<br>buy)  | \$0.53   | 12/15/2005 |                 |    | A  |   | 300,000       |   | (1)   | 12             | 2/15/2015                             | common<br>stock                             | 300,000  | \$0.0   | 0  | 300,000 | 0   | D  |   |

## **Explanation of Responses:**

 $1. \ The \ option \ vests \ quarterly \ over \ four \ years \ beginning \ with \ the \ quarter \ ending \ March \ 15, \ 2006.$ 

## Remarks:

Sudhir Agrawal

\*\* Signature of Reporting Person

12/19/2005

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.

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 Number.