

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

OMB APPROVAL	
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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* <u>Senator Investment Group LP</u> (Last) (First) (Middle) 1330 AVENUE OF THE AMERICAS 26TH FLOOR (Street) NEW YORK NY 10019 (City) (State) (Zip)	2. Date of Event Requiring Statement (Month/Day/Year) 08/04/2010	3. Issuer Name and Ticker or Trading Symbol <u>IDERA PHARMACEUTICALS, INC. [IDRA]</u>	
		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director <input checked="" type="checkbox"/> 10% Owner Officer (give title below) Other (specify below)	5. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)
Common Stock	3,234,505	I	See Footnotes ⁽¹⁾⁽²⁾

Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Warrants (right to buy)	08/04/2010 ⁽³⁾	08/04/2015	Common Stock	1,293,802	3.71	I	See Footnotes ⁽¹⁾⁽²⁾

Explanation of Responses:

- The entities and individuals identified in this Form 3 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. Senator LP disclaims any beneficial ownership of any other Issuer's securities reported herein.
- The warrants may be exercised so long as the Reporting Person holds no more than 4.99% of the number of shares of common stock outstanding after such exercise. The limit may be increased to 9.99% upon no less than 61 days notice to the Issuer.

Remarks:

The filing of this statement shall not be deemed an admission that the Reporting Person is the beneficial owner of any securities not held directly for its account for purposes of Section 16 of the Securities Act of 1934, as amended, or otherwise.

/s/ Edward Larmann, as an authorized signatory for Senator Investment Group LP, in its capacity as investment manager of the Senator Global Opportunity Master Fund L.P. 08/12/2010

** 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 5 (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.