

IDERA PHARMACEUTICALS, INC.  
 Form 3  
 August 12, 2010

**FORM 3 UNITED STATES SECURITIES AND EXCHANGE COMMISSION**  
**Washington, D.C. 20549**

OMB APPROVAL

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**INITIAL STATEMENT OF 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 *			2. Date of Event Requiring Statement		3. Issuer Name <b>and</b> Ticker or Trading Symbol	
Â Senator Investment Group LP			(Month/Day/Year)		IDERA PHARMACEUTICALS, INC. [IDRA]	
(Last)	(First)	(Middle)	08/04/2010		4. Relationship of Reporting Person(s) to Issuer	
1330 AVENUE OF THE AMERICAS,Â 26TH FLOOR					5. If Amendment, Date Original Filed(Month/Day/Year)	
(Street)					(Check all applicable)	
NEW YORK,Â NYÂ 10019					<input type="checkbox"/> Director <input checked="" type="checkbox"/> 10% Owner <input type="checkbox"/> Officer <input type="checkbox"/> Other (give title below)    (specify below)	
(City)	(State)	(Zip)			6. Individual or Joint/Group Filing(Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> 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 <sup>(1)</sup> <sup>(2)</sup>

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

SEC 1473 (7-02)

**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 number.**

**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 of Derivative Security: Direct (D)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Title			

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	Expiration Date	Amount or Number of Shares	or Indirect (I) (Instr. 5)	
Warrants (right to buy)	08/04/2010 <sup>(3)</sup> 08/04/2015	Common Stock 1,293,802	\$ 3.71	I See Footnotes <sup>(1)</sup> <u>(2)</u>

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Senator Investment Group LP 1330 AVENUE OF THE AMERICAS 26TH FLOOR NEW YORK, NY 10019	^	^ X	^	^

## Signatures

/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

## Explanation of Responses:

- \* 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).
- (1) 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.
- (3) 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.

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### Remarks:

The filing of this statement shall not be deemed an admission that the Reporting Person is the beneficial owner of the securities.

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.