## FORM 4

## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

OMB APPROVAL									
OMB Number: 3235-0287									
Expires:	December 31, 2014								
Estimated average burden									
hours per response	0.5								

1. Name and Address of Reporting Person* MUELLER HANS			2. Issuer Name <b>and</b> Ticker or Trading Symbol IDERA PHARMACEUTICALS, INC. [IDRA]	5. Relationship of Reporting Person(s) to Issuer				
(Last) 1802 CHESTI			3. Date of Earliest Transaction (Month/Day/Year) 06/04/2008	(Check all applicable)  X Director 10% Owner  Officer (give Other (specititle below) below)				
(Street) WEST CHESTER	EST PA 19382		4. If Amendment, Date of Original Filed (Month/Day/Year)	6. Individual or Joint/Group Filing (Check Applicable Line) X Form filed by One Reporting Person Form filed by More than One Reporting				
(City)	(State)	(Zip)		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)	Code	Transaction Code (Instr. 8)		rities d (A) d of , 4 aı (A) or (D)	or	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)		

	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. Transac Code (Instr. 8		of and Ex		and Expira	6. Date Exercisable and Expiration Date (Month/Day/Year)		on Date Amount of		9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	v	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Stock Options	\$ 14.21	06/04/2008		A		10,000		(1)	06/04/2018	Common Stock	10,000	\$ 0	10,000	D	

## **Explanation of Responses:**

1. The option vests in equal quarterly installments over three years, beginning 9/4/2008.

<u>Hans Mueller</u> <u>06/04/2008</u>

\*\* Signature of Reporting Date

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

- $^{\star}$  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.