

## 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

<b>1. Name and Address of Reporting Person*</b> <u>Kirby John J.</u>  (Last) (First) (Middle) <u>C/O IDERA PHARMACEUTICALS, INC.</u> <u>505 EAGLEVIEW BLVD., SUITE 212</u>  (Street) <u>EXTON PA 19341</u>  (City) (State) (Zip)	<b>2. Date of Event Requiring Statement (Month/Day/Year)</b> <u>10/31/2018</u>	<b>3. Issuer Name and Ticker or Trading Symbol</b> <u>IDERA PHARMACEUTICALS, INC. [ IDRA ]</u>  <b>4. Relationship of Reporting Person(s) to Issuer (Check all applicable)</b> Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) <u>V.P. of Finance, PFO &amp; PAO</u>	<b>5. If Amendment, Date of Original Filed (Month/Day/Year)</b>  <b>6. Individual or Joint/Group Filing (Check Applicable Line)</b> <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person
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### 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)
<u>Common Stock</u>	<u>2,259<sup>(1)</sup></u>	<u>D</u>	

### 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			
<u>Stock Option (Right to Buy)</u>	<u>(2)(3)</u>	<u>11/02/2025</u>	<u>Common Stock</u>	<u>18,750</u>	<u>24.88</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(2)(4)</u>	<u>01/06/2026</u>	<u>Common Stock</u>	<u>11,249</u>	<u>23.04</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(2)(5)</u>	<u>01/04/2027</u>	<u>Common Stock</u>	<u>12,499</u>	<u>12.72</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(2)(6)</u>	<u>01/03/2028</u>	<u>Common Stock</u>	<u>16,874</u>	<u>17.92</u>	<u>D</u>	
<u>Stock Option (Right to Buy)</u>	<u>(2)(7)</u>	<u>08/13/2028</u>	<u>Common Stock</u>	<u>10,000</u>	<u>7.39</u>	<u>D</u>	

**Explanation of Responses:**

1. Includes 1,809 shares purchased through the Company's 1995 and 2017 Employee Stock Purchase Plans.
2. Option vests over a four-year period commencing on the grant date. 25% vests on the first anniversary date of grant with the balance vesting in equal quarterly installments over the remaining three years of the four-year vesting period.
3. Grant date 11/2/15.
4. Grant date 1/6/16.
5. Grant date 1/4/17.
6. Grant date 1/3/18.
7. Grant date 8/13/18.

/s/ John J. Kirby

11/02/2018

\*\* 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.

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