

OMB APPROVAL	
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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* <u>BAKER BROS. ADVISORS LP</u> (Last) (First) (Middle) 860 WASHINGTON STREET 3RD FLOOR (Street) NEW YORK NY 10014 (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>IDERA PHARMACEUTICALS, INC. [IDRA]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below)
	3. Date of Earliest Transaction (Month/Day/Year) 10/26/2017	
4. If Amendment, Date of Original Filed (Month/Day/Year)		

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)	3. Transaction Code (Instr. 8)		4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			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)
			Code	V	Amount	(A) or (D)	Price			
Common Stock								154,498	I	See footnotes ⁽¹⁾⁽⁵⁾⁽⁶⁾
Common Stock	10/26/2017		P		795,348	A	\$1.5	1,842,617	I	See footnotes ⁽²⁾⁽³⁾⁽⁵⁾⁽⁶⁾
Common Stock	10/26/2017		P		7,204,652	A	\$1.5	16,557,473	I	See footnotes ⁽²⁾⁽⁴⁾⁽⁵⁾⁽⁶⁾

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. Transaction Code (Instr. 8)		5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
				Code	V	(A)	(D)	Date Exercisable	Expiration Date					

1. Name and Address of Reporting Person* <u>BAKER BROS. ADVISORS LP</u> (Last) (First) (Middle) 860 WASHINGTON STREET 3RD FLOOR (Street) NEW YORK NY 10014 (City) (State) (Zip)		
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1. Name and Address of Reporting Person*

[14159, L.P.](#)

(Last) (First) (Middle)

860 WASHINGTON STREET, 3RD FLOOR

(Street)

NEW YORK NY 10014

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[667, L.P.](#)

(Last) (First) (Middle)

860 WASHINGTON STREET, 3RD FLOOR

(Street)

NEW YORK NY 10014

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[Baker Bros. Advisors \(GP\) LLC](#)

(Last) (First) (Middle)

860 WASHINGTON STREET
3RD FLOOR

(Street)

NEW YORK NY 10014

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[Baker Brothers Life Sciences LP](#)

(Last) (First) (Middle)

860 WASHINGTON STREET
3RD FLOOR

(Street)

NEW YORK NY 10014

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[BAKER FELIX](#)

(Last) (First) (Middle)

860 WASHINGTON STREET
3RD FLOOR

(Street)

NEW YORK NY 10014

(City) (State) (Zip)

1. Name and Address of Reporting Person*

[BAKER JULIAN](#)

(Last) (First) (Middle)

[860 WASHINGTON STREET, 3RD FLOOR](#)

(Street)

[NEW YORK NY 10014](#)

(City) (State) (Zip)

Explanation of Responses:

- As a result of Felix J. Baker's and Julian C. Baker's ownership interest in 14159 Capital (GP), LLC, Felix J. Baker and Julian C. Baker may be deemed to have an indirect pecuniary interest in 154,498 shares of common stock of the Issuer beneficially owned by 14159, L.P. ("14159"), a limited partnership of which the sole general partner is 14159 Capital, L.P., a limited partnership of which the sole general partner is 14159 Capital (GP), LLC, due to 14159 Capital, L.P.'s right to receive an allocation of a portion of the profits from 14159. Includes beneficial ownership of 119,393 shares issued pursuant to the Stock Incentive Plan in lieu of director retainer fees, of which the fund may be deemed to own a portion.
- On October 26, 2017, 667, L.P. ("667") and Baker Brothers Life Sciences, L.P. ("Life Sciences"), and together with 667 and 14159 the "Funds") purchased 795,348 and 7,204,652 shares of the Common Stock, respectively of Idera Pharmaceuticals, Inc. (the "Issuer"), pursuant to an underwritten public offering.
- After giving effect to the transactions reported herein and as a result of Felix J. Baker's and Julian C. Baker's ownership interest in Baker Biotech Capital (GP), LLC, Felix J. Baker and Julian C. Baker may be deemed to have an indirect pecuniary interest in 1,842,617 shares of common stock of the Issuer beneficially owned by 667, a limited partnership of which the sole general partner is Baker Biotech Capital, L.P., a limited partnership of which the sole general partner is Baker Biotech Capital (GP), LLC, due to Baker Biotech Capital, L.P.'s right to receive an allocation of a portion of the profits from 667. Includes beneficial ownership of 119,393 shares issued pursuant to the Stock Incentive Plan in lieu of director retainer fees of which the fund may be deemed to own a portion.
- After giving effect to the transactions reported herein and as a result of Felix J. Baker's and Julian C. Baker's ownership interest in Baker Brothers Life Sciences Capital (GP), LLC, Felix J. Baker and Julian C. Baker may be deemed to have an indirect pecuniary interest 16,557,473 shares of common stock of the Issuer beneficially owned by 667, a limited partnership of which the sole general partner is Baker Brothers Life Sciences Capital, L.P., a limited partnership of which the sole general partner is Baker Brothers Life Sciences Capital (GP), LLC, due to Baker Brothers Life Sciences Capital, L.P.'s right to receive an allocation of a portion of the profits from Life Sciences. Includes beneficial ownership of 119,393 shares issued pursuant to the Stock Incentive Plan in lieu of director retainer fees, of which the fund may be deemed to own a portion.
- Baker Bros. Advisors LP (the "Adviser") serves as the Investment Adviser to the Funds. In connection with the services provided by the Adviser, the Adviser receives an asset-based management fee that does not confer any pecuniary interest in the securities held by the Funds. Baker Bros. Advisors (GP) LLC (the "Adviser GP") is the Adviser's sole general partner. Julian C. Baker and Felix J. Baker are principals of the Adviser GP. The Adviser has complete and unlimited discretion and authority with respect to the investment and voting power of the securities held by the Funds. The general partners of the Funds relinquished to the Adviser all discretion and authority with respect to the investment and voting power of the securities held by the Funds.
- Julian C. Baker, Felix J. Baker, the Adviser GP and the Adviser disclaim beneficial ownership of the securities held directly by the Funds except to the extent of their pecuniary interest therein, and this report shall not be deemed an admission that any of Julian C. Baker, Felix J. Baker, the Adviser GP or the Adviser is a beneficial owner of such securities for purposes of Section 16 or any other purpose.

Remarks:

Remarks: Julian C. Baker and Dr. Kelvin M. Neu, respectively, a principal and an employee of Baker Bros. Advisors LP (the "Adviser") are directors of Idera Pharmaceuticals, Inc. ("the Issuer"). By virtue of their representation on the Board of Directors of the Issuer, for purposes of Section 16 of the Securities Exchange Act of 1934, as amended, the reporting persons are deemed directors by deputation of the Issuer.

[By: Baker Bros. Advisors LP,](#)
[Name: Scott L. Lessing, Title: 10/30/2017](#)
[President /s/ Scott L. Lessing](#)
[Baker Bros. Advisors LP,](#)
[Mgmt. Co. and Inv. Adviser to](#)
[14159, L.P., pursuant to](#)
[authority granted by 14159 10/30/2017](#)
[Capital, L.P., GP to 14159,](#)
[L.P. Name: Scott L. Lessing,](#)
[Title: President /s/ Scott L.](#)
[Lessing](#)
[Baker Bros. Advisors LP,](#)
[Mgmt. Co. and Inv. Adviser to](#)
[667, L.P., pursuant to](#)
[authority granted by Baker 10/30/2017](#)
[Biotech Capital, L.P., GP to](#)
[667, L.P. Name: Scott L.](#)
[Lessing, Title: President /s/](#)
[Scott L. Lessing](#)
[By: Baker Bros. Advisors \(GP\)](#)
[LLC, Name: Scott L. Lessing, 10/30/2017](#)
[Title: President /s/ Scott L.](#)
[Lessing](#)
[Baker Bros. Advisors LP,](#)
[Mgmt. Co. and Inv. Adviser to](#)
[BAKER BROTHERS LIFE](#)
[SCIENCES, L.P., pursuant to](#)
[authority granted by Baker 10/30/2017](#)
[Brothers Life Sciences](#)
[Capital, L.P., GP to Baker](#)
[Brothers Life Sciences, L.P.,](#)
[Name: Scott L. Lessing, Title:](#)
[President /s/](#)
[/s/ Felix J. Baker 10/30/2017](#)
[/s/ Julian C. Baker 10/30/2017](#)

** 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 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.