

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

FORM S-8
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

IDERA PHARMACEUTICALS, INC.
(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization)

04-3072298
(I.R.S. Employer Identification Number)

505 Eagleview Blvd., Suite 212
Exton, Pennsylvania
(Address of Principal Executive Offices)

19341
(Zip Code)

IDERA PHARMACEUTICALS, INC. 2017 EMPLOYEE STOCK PURCHASE PLAN
(Full title of the plan)

Vincent J. Milano
President and Chief Executive Officer
505 Eagleview Blvd., Suite 212
Exton, Pennsylvania 19341
(Name and address of agent for service)

(484) 348-1600
(Telephone number, including area code, of agent for service)

Copy to:
Celia A. Soehner, Esq.
Alexandra M. Good, Esq.
Morgan, Lewis & Bockius LLP
One Oxford Centre, 32nd Floor,
Pittsburgh, PA 15219
(412) 560-3300

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

EXPLANATORY NOTE

Pursuant to General Instruction E of Form S-8, Idera Pharmaceuticals, Inc. (the “Company”) is filing this Registration Statement on Form S-8 (this “Registration Statement”) to register the offer and sale of an additional 600,000 shares of common stock, \$0.001 par value (the “Common Stock”), under the Idera Pharmaceuticals, Inc. 2017 Employee Stock Purchase Plan, as amended (the “Plan”). This Registration Statement hereby incorporates by reference the contents of the Company’s Registration Statements on Form S-8 filed with the Securities and Exchange Commission (the “Commission”) on [August 7, 2017](#) (File No. 333-219740) and [July 11, 2019](#) (File No. 333-232609).

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference

The following documents previously filed by the Company with the Commission are incorporated by reference into this Registration Statement:

- (a) [The Company’s Annual Report on Form 10-K for the fiscal year ended December 31, 2021 \(filed on March 31, 2022\)](#);
- (b) [The Company’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2022 \(filed on May 5, 2022\)](#);
- (c) The Company’s Current Reports on Form 8-K filed on [May 27, 2022](#) and [June 24, 2022](#); and
- (d) The description of the Company’s Common Stock Registration Statements set forth on Form 8-A filed with the Commission on [December 4, 2003](#), as amended on [August 17, 2007](#) and [December 7, 2007](#).

To the extent that any information contained in any Current Report on Form 8-K, or any exhibit thereto, was furnished to, rather than filed with, the Commission, such information or exhibit is specifically not incorporated by reference.

All reports and other documents that the Company subsequently files with the Commission pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), after the date of this Registration Statement and prior to the filing of a post-effective amendment that indicates that the Company has sold all of the securities offered under this Registration Statement or deregisters the distribution of all such securities then remaining unsold shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date that the Company files such report or document.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document that also is, or is deemed to be, incorporated by reference herein modifies or replaces such statement. Any such statement so modified or replaced shall not be deemed, except as so modified or replaced, to constitute a part of this Registration Statement.

Item 8. Exhibits.

A list of exhibits filed herewith is contained in the Exhibit Index that immediately precedes such exhibits and is incorporated herein by reference.

INDEX TO EXHIBITS

Exhibit No.	Description
<u>5.1*</u>	<u>Opinion of Morgan, Lewis & Bockius LLP</u>
<u>23.1*</u>	<u>Consent of Independent Registered Public Accounting Firm</u>
<u>23.2*</u>	<u>Consent of Morgan, Lewis & Bockius LLP (included in Exhibit 5.1 hereto)</u>
<u>24.1</u>	<u>Powers of Attorney (included as part of the signature page)</u>
<u>99.1</u>	<u>Idera Pharmaceuticals, Inc. 2017 Employee Stock Purchase Plan (Incorporated herein by reference to Exhibit 10.2 to the Current Report on Form 8-K, filed on June 9, 2017)</u>
<u>99.2</u>	<u>Amendment to Idera Pharmaceuticals, Inc. 2017 Employee Stock Purchase Plan (Incorporated herein by reference to Exhibit 10.2 to the Current Report on Form 8-K, filed on June 24, 2022)</u>
<u>107*</u>	<u>Filing Fee Table</u>

* Filed herewith

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Exton, Commonwealth of Pennsylvania, on or before July 6, 2022.

Idera Pharmaceuticals, Inc.

By: /s/ Vincent J. Milano

Vincent J. Milano

President and Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned officers and directors of Idera Pharmaceuticals, Inc. hereby severally constitute and appoint Vincent J. Milano and John J. Kirby, and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, to sign for us and in our names in the capacities indicated below, the registration statement on Form S-8 filed herewith and any and all subsequent amendment to said registration statement, and generally to do all such things in our names and on our behalf in our capacities as officers and directors to enable Idera Pharmaceuticals, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said registration statement and any and all amendments thereto.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons in the capacities indicated and on or before this 6th day of July, 2022:

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Vincent J. Milano</u> Vincent J. Milano	President, Chief Executive Officer and Director (Principal Executive Officer)	July 6, 2022
<u>/s/ John J. Kirby</u> John J. Kirby	Senior Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	July 6, 2022
<u>/s/ Michael Dougherty</u> Michael Dougherty	Chairman of the Board of Directors	July 6, 2022
<u>/s/ Cristina Csimma</u> Cristina Csimma, PharmD, MHP	Director	July 6, 2022
<u>/s/ James A. Geraghty</u> James A. Geraghty	Director	July 6, 2022
<u>/s/ Mark Goldberg</u> Mark Goldberg, M.D.	Director	July 6, 2022
<u>/s/ Maxine Gowen</u> Maxine Gowen, Ph.D.	Director	July 6, 2022
<u>/s/ Carol A. Schafer</u> Carol A. Schafer	Director	July 6, 2022

July 6, 2022

Idera Pharmaceuticals, Inc.
505 Eagleview Blvd., Suite 212
Exton, Pennsylvania 19341

Re: Idera Pharmaceuticals, Inc. Registration Statement on Form S-8 Filed on July 6, 2022

Ladies and Gentlemen:

We have acted as counsel to Idera Pharmaceuticals, Inc., a Delaware corporation (the "Company"), in connection with its filing of a Registration Statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), with the Securities and Exchange Commission (the "SEC") on the date hereof. The Registration Statement relates to the registration of the offer and sale of 600,000 shares of common stock, \$0.001 par value, of the Company (the "Common Stock"), which may be issued under the Idera Pharmaceuticals, Inc. 2017 Employee Stock Purchase Plan, as amended (the "Plan").

In connection with this opinion letter, we have examined the Registration Statement and originals, or copies certified or otherwise identified to our satisfaction, of (i) the Restated Certificate of Incorporation of the Company, as amended to date, (ii) the Amended and Restated Bylaws of the Company, as amended to date, (iii) certain resolutions of the Company's Board of Directors relating to the Registration Statement, (iv) the Plan, and (v) such other documents, records, and other instruments as we have deemed appropriate for purposes of the opinions set forth herein.

We have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of the documents submitted to us as originals, the conformity with the originals of all documents submitted to us as certified, facsimile or photostatic copies, and the authenticity of the originals of all documents submitted to us as copies. With respect to matters of fact relevant to our opinions as set forth below, we have relied upon certificates of officers of the Company, representations made by the Company in documents examined by us, and representations of officers of the Company. We have also obtained and relied upon such certificates and assurances from public officials as we have deemed necessary for the purposes of our opinions set forth below.

Subject to the foregoing and the other matters set forth herein, we are of the opinion, as of the date hereof that the Common Stock has been duly authorized by the Company and, when issued by the Company in accordance with the provisions of the Plan, will be validly issued, fully paid, and non-assessable.

We hereby consent to the use of this opinion as Exhibit 5.1 to the Registration Statement. In giving such consent, we do not hereby admit that we are acting within the category of persons whose consent is required under Section 7 of the Act or the rules or regulations of the SEC thereunder.

The opinions expressed herein are limited to the Federal laws of the United States and the Delaware General Corporation Law, as amended.

Very truly yours,

/s/ Morgan, Lewis & Bockius LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2017 Employee Stock Purchase Plan, as amended, of Idera Pharmaceuticals, Inc. of our report dated March 31, 2022, with respect to the financial statements of Idera Pharmaceuticals, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2021, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania
July 6, 2022

Calculation of Filing Fee Table

Form S-8
(Form Type)Idera Pharmaceuticals, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Newly Registered Securities												Filing Fee Previously Paid in Connection with Unsold Securities to be Carried Forward
Security Type	Security Class Title(1)	Fee Calculation or Carry Forward Rule	Amount Registered (1)	Proposed Maximum Offering Price Per Unit (2)	Proposed Maximum Aggregate Offering Price (2)	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date		
Fees to be Paid	Equity	Common Stock, \$0.001 par value	600,000	\$ 0.44	\$ 264,000.00	\$92.70 per \$1,000,000.00	\$ 24.47	-	-	-	-	
Fees Previously Paid	-	-	-	-	-	-	-	-	-	-	-	
Carry Forward Securities												
Carry Forward Securities	-	-	-	-	-	-	-	-	-	-	-	
	Total Offering Amounts						\$ 24.47					
	Total Fees Previously Paid						-					
	Total Fee Offsets						-					
	Net Fee Due						\$ 24.47					

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement on Form S-8 shall also cover any additional shares of the registrant's common stock, \$0.001 par value (the "Common Stock") which become issuable under the Idera Pharmaceuticals, Inc. 2017 Employee Stock Purchase Plan, as amended, by reason of any stock dividend, stock split, recapitalization, or any other similar transaction effected without the receipt of consideration which results in an increase in the number of outstanding shares of Common Stock.
- (2) Estimated solely for the purpose of determining the registration fee pursuant to Rules 457(c) and 457(h) under the Securities Act, based on the average of the high and low prices of the Common Stock as reported on The Nasdaq Capital Market on June 30, 2022.