

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

**FORM S-8  
REGISTRATION STATEMENT**

Under  
The Securities Act of 1933

**ATHIRA PHARMA, INC.**

(Exact name of Registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**45-3368487**  
(I.R.S. Employer  
Identification Number)

**18706 North Creek Parkway, Suite 104  
Bothell, WA 98011**

(Address of principal executive offices, including zip code)

**2020 Equity Incentive Plan  
2020 Employee Stock Purchase Plan**

(Full title of the plans)

**Mark Litton, Ph.D.  
President and Chief Executive Officer  
Athira Pharma, Inc.**

**18706 North Creek Parkway, Suite 104  
Bothell, WA 98011  
(425) 620-8501**

(Name, address and telephone number, including area code, of agent for service)

**Copies to:**

**Michael Nordtvedt  
Bryan D. King**

**Wilson Sonsini Goodrich & Rosati,  
Professional Corporation  
701 Fifth Avenue, Suite 5100  
Seattle, WA 98104  
(206) 883-2500**

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

Non-accelerated filer

Accelerated filer

Smaller reporting company

Emerging growth company

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 to Section 7(a)(2)(B) of the Securities Act.

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## EXPLANATORY NOTE

This Registration Statement on Form S-8 (this “Registration Statement”) is being filed by Athira Pharma, Inc. (the “Registrant”) for the purpose of registering 1,893,869 shares of common stock of the Registrant under the Athira Pharma, Inc. 2020 Equity Incentive Plan (the “2020 Plan”) and 378,774 shares of common stock of the Registrant under the Athira Pharma, Inc. 2020 Employee Stock Purchase Plan (the “2020 ESPP”). Accordingly, contents of (i) the previous Registration Statement on Form S-8 filed by the Registrant with the Securities and Exchange Commission (the “Commission”) on September 18, 2020 (File No. 333-248910), (ii) the previous Registration Statement on Form S-8 filed by the Registrant with the Commission on March 26, 2021 (File No. 333-254735) and (iii) the previous Registration Statement on Form S-8 filed by the Registrant with the Commission on March 28, 2022 (File No. 333-263907) (together, the “Previous Forms S-8”), including the information incorporated by reference therein and the periodic reports filed after the Previous Forms S-8 to maintain current information about the Registrant, are incorporated by reference into this Registration Statement pursuant to General Instruction E of Form S-8 (the “Registration Statement”).

### PART II

#### INFORMATION REQUIRED IN REGISTRATION STATEMENT

##### Item 3. Incorporation of Documents by Reference.

The Registrant hereby incorporates by reference into this Registration Statement the following documents previously filed with the Commission:

- (1) The Registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2022, filed with the Commission on [March 23, 2023](#) pursuant to Section 13(a) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”);
- (2) All other reports filed with the Commission pursuant to Section 13(a) or 15(d) of the Exchange Act (other than the reports, or portions thereof, deemed to have been furnished and not filed with the Commission) since the end of the fiscal year covered by the Annual Report referred to in (1) above; and
- (3) The description of the Registrant’s Common Stock contained in the Company’s Registration Statement on Form 8-A (File No. 001-39503) filed with the Commission on [September 9, 2020](#), pursuant to Section 12(b) of the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement that indicates that all securities offered have been sold or that deregisters all 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 of filing of such documents; *provided, however*, that documents or information deemed to have been furnished and not filed in accordance with the rules of the Commission shall not be deemed incorporated by reference into this Registration Statement. 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 subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

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**Item 8. Exhibits.**

Exhibit Number	Exhibit Description	Form	Incorporated by Reference		Filing Date
			File No.	Exhibit	
4.1	<a href="#">Specimen common stock certificate of the Registrant</a>	S-1/A	333-248428	4.1	September 14, 2020
4.2	<a href="#">2020 Equity Incentive Plan</a>	S-1/A	333-248428	10.5	September 8, 2020
4.3	<a href="#">Form of Stock Option Agreement under the 2020 Equity Incentive Plan</a>	S-1/A	333-248428	10.6	September 8, 2020
4.4	<a href="#">Form of Restricted Stock Award Agreement under the 2020 Equity Incentive Plan</a>	S-1/A	333-248428	10.7	September 8, 2020
4.5	<a href="#">Form of RSU Agreement under the 2020 Equity Incentive Plan</a>	S-1/A	333-248428	10.8	September 8, 2020
4.6	<a href="#">2020 Employee Stock Purchase Plan, as amended and Form of Subscription Agreement thereunder</a>	10-K	001-39503	10.8	March 23, 2023
5.1	<a href="#">Opinion of Wilson Sonsini Goodrich &amp; Rosati, Professional Corporation</a>				
23.1	<a href="#">Consent of Independent Registered Public Accounting Firm</a>				
23.2	<a href="#">Consent of Wilson Sonsini Goodrich &amp; Rosati, Professional Corporation (contained in Exhibit 5.1 hereto)</a>				
24.1	<a href="#">Power of Attorney (contained on signature page hereto)</a>				
107	<a href="#">Filing Fee Table</a>				

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## 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 Bothell, State of Washington, on March 23, 2023.

### ATHIRA PHARMA, INC.

By: /s/ Mark Litton

*Mark Litton, Ph.D.*

*President and Chief Executive Officer*

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Mark Litton and Glenna Mileson, and each of them, as his or her true and lawful attorney-in-fact and agent with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this registration statement on Form S-8 (including post-effective amendments), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact, proxy and agent full power and authority to do and perform each and every act and thing requisite or necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all the said attorney-in-fact, proxy and agent, or his substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Mark Litton</u> Mark Litton	President, Chief Executive Officer and Director (Principal Executive Officer)	March 23, 2023
<u>/s/ Glenna Mileson</u> Glenna Mileson	Chief Financial Officer (Principal Accounting and Financial Officer)	March 23, 2023
<u>/s/ Kelly A. Romano</u> Kelly A. Romano	Chair of the Board of Directors	March 23, 2023
<u>/s/ Joseph Edelman</u> Joseph Edelman	Director	March 23, 2023
<u>/s/ John M. Fluke, Jr.</u> John M. Fluke, Jr.	Director	March 23, 2023
<u>/s/ James A. Johnson</u> James A. Johnson	Director	March 23, 2023
<u>/s/ Barbara Kosacz</u> Barbara Kosacz	Director	March 23, 2023
<u>/s/ Michael Panzara</u> Michael Panzara	Director	March 23, 2023
<u>/s/ Grant Pickering</u> Grant Pickering	Director	March 23, 2023

March 23, 2023

Athira Pharma, Inc.  
18706 North Creek Parkway, Suite 104  
Bothell, WA 98011

**Re: Registration Statement on Form S-8**

Ladies and Gentlemen:

We have examined the Registration Statement on Form S-8 (the “Registration Statement”) to be filed by Athira Pharma, Inc., a Delaware corporation, with the Securities and Exchange Commission on or about the date hereof, in connection with the registration under the Securities Act of 1933, as amended, of an aggregate of 2,272,643 shares of your common stock, par value \$0.0001 per share (the “Shares”), consisting of: (i) 1,893,869 shares of common stock to be issued under the 2020 Equity Incentive Plan (the “2020 Plan”) and (ii) 378,774 shares of common stock to be issued under the 2020 Employee Stock Purchase Plan (the “2020 ESPP,” and together with the 2020 Plan, the “Plans”). As your legal counsel, we have reviewed the actions proposed to be taken by you in connection with the issuance and sale of the Shares to be issued under the Plans.

It is our opinion that the Shares, when issued and sold in the manner referred to in the Plans and pursuant to the agreements that accompany the Plans, will be legally and validly issued, fully paid and nonassessable.

We consent to the use of this opinion as an exhibit to the Registration Statement, and further consent to the use of our name wherever appearing in the Registration Statement and any amendments thereto.

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AUSTIN    BEIJING    BOSTON    BRUSSELS    HONG KONG    LONDON    LOS ANGELES    NEW YORK    PALO ALTO  
SAN DIEGO    SAN FRANCISCO    SEATTLE    SHANGHAI    WASHINGTON, DC    WILMINGTON, DE

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Very truly yours,

/s/ Wilson Sonsini Goodrich & Rosati, P.C.

WILSON SONSINI GOODRICH & ROSATI  
Professional Corporation

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**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2020 Equity Incentive Plan and 2020 Employee Stock Purchase Plan of Athira Pharma, Inc. of our report dated March 23, 2023, with respect to the consolidated financial statements of Athira Pharma, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2022, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Seattle, Washington  
March 23, 2023

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**Calculation of Filing Fee Table**

**Form S-8**  
(Form Type)

**Athira Pharma, Inc.**  
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered <sup>(1)(2)</sup>	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock, \$0.0001 par value per share, reserved for issuance pursuant to the 2020 Employee Stock Purchase Plan	Other <sup>(4)</sup>	378,774 <sup>(3)</sup>	\$ 2.27 <sup>(4)</sup>	\$ 859,611.50	\$ 0.00011020	\$ 94.73
Equity	Common Stock, \$0.0001 par value per share, reserved for issuance pursuant to the 2020 Equity Incentive Plan	Other <sup>(6)</sup>	1,893,869 <sup>(5)</sup>	\$ 2.67 <sup>(6)</sup>	\$5,056,535.54	\$ 0.00011020	\$ 557.23
<b>Total</b>			<b>2,272,643</b>		<b>\$ 5,916,147.04</b>		<b>\$ 651.96</b>
<b>Total Fee Offsets</b>							<b>\$ —</b>
<b>Net Fee Due</b>							<b>\$ 651.96</b>

- (1) Represents shares of common stock, par value \$0.0001 per share (“Common Stock”) of Athira Pharma, Inc. (the “Registrant”) available for issuance pursuant to awards granted pursuant to the Registrant’s 2020 Employee Stock Purchase Plan (the “2020 ESPP”) and 2020 Equity Incentive Plan (the “2020 Plan”). In addition, pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement shall also cover any additional shares of the Registrant’s Common Stock that become issuable under the 2020 ESPP or 2020 Plan by reason of an event such as any stock split, stock dividend, recapitalization or similar transaction effected without receipt of consideration that increases the number of the Registrant’s outstanding shares of Common Stock.
- (2) For the sole purpose of calculating the registration fee, the amount to be registered under this Registration Statement has been broken down into two subtotals.
- (3) Represents an automatic annual increase on January 1, 2023 to the number of shares of the Registrant’s common stock reserved for issuance under the 2020 ESPP pursuant to an “evergreen” provision contained in the 2020 ESPP. Pursuant to such provision, the number of shares of the Registrant’s common stock available for issuance under the 2020 ESPP is subject to an annual increase on the first day of each fiscal year by an amount equal to the least of (i) 646,000 shares of common stock, (ii) one percent (1%) of the outstanding shares of all classes of the Registrant’s common stock on the last day of the immediately preceding fiscal year or (iii) such other number of shares as the Registrant’s board of directors may determine as of no later than the last day of the Registrant’s immediately preceding fiscal year.

- (4) Estimated in accordance with Rules (c) and (h) of Rule 457 under the Securities Act solely for the purposes of calculating the registration fee on the basis of 85% of \$2.67 per share, which represents the average of the high and low price per share of the Registrant's Common Stock on March 21, 2023, as reported on The Nasdaq Global Market. Pursuant to the 2020 ESPP, the purchase price of the shares of the Registrant's Common Stock reserved for issuance thereunder will be 85% of the lower of the fair market value of the Common Stock on the first trading day of the offering period or on the last day of the offering period.
- (5) Represents an automatic annual increase on January 1, 2023 to the number of shares of the Registrant's common stock reserved for issuance under the 2020 Plan pursuant to an "evergreen" provision contained in the 2020 Plan. Pursuant to such provision, the number of shares of the Registrant's common stock available for grant and issuance under the 2020 Plan is subject to an annual increase on the first day of each fiscal year by an amount equal to the least of (i) 3,230,000 shares of common stock, (ii) five percent (5%) of the outstanding shares of all classes of the Registrant's common stock as of the last day of the immediately preceding fiscal year or (iii) such number of shares as the Registrant's board of directors may determine no later than the last day of the Registrant's immediately preceding fiscal year.
- (6) Estimated in accordance with Rules 457(c) and (h) of the Securities Act solely for purposes of calculating the registration fee on the basis of \$2.67 per share, which represents the average of the high and low prices of the Registrant's Common Stock on March 21, 2023, as reported on The Nasdaq Global Market.
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