SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934

(Amendment No. 5)*

Athira Pharma, Inc.

(Name of Issuer)

Common Stock, $0.0001 par value

(Title of Class of Securities)

04746L203

(CUSIP Number)

Alexander Rakitin
Perceptive Advisors LLC, 51 Astor Place, 10th Floor
New York, NY, 10003
(646) 205-5345

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

12/23/2025

(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box. ☐

The information required on the remainder of this cover page shall not be deemed to be “filed” for the purpose of Section 18 of the Securities Exchange Act of 1934 (“Act”) or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

SCHEDULE 13D

CUSIP No. 04746L203

1	Name of reporting person Perceptive Advisors LLC
2	Check the appropriate box if a member of a Group (See Instructions)

	☐ (a) ☑ (b)
3	SEC use only
4	Source of funds (See Instructions) AF
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐
6	Citizenship or place of organization DELAWARE

Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 1,859,322.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 1,859,322.00

11	Aggregate amount beneficially owned by each reporting person 1,859,322.00
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐
13	Percent of class represented by amount in Row (11) 19.99 %
14	Type of Reporting Person (See Instructions) IA

SCHEDULE 13D

CUSIP No. 04746L203

1	Name of reporting person Joseph Edelman
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☑ (b)
3	SEC use only
4	Source of funds (See Instructions) AF
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐
6	Citizenship or place of organization UNITED STATES

Number of	7	Sole Voting Power

Shares Beneficially Owned by Each Reporting Person With:		0.00
	8	Shared Voting Power 1,869,050.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 1,869,050.00

11	Aggregate amount beneficially owned by each reporting person 1,869,050.00
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐
13	Percent of class represented by amount in Row (11) 20.1 %
14	Type of Reporting Person (See Instructions) IN

SCHEDULE 13D

CUSIP No. 04746L203

1	Name of reporting person Perceptive Life Sciences Master Fund, Ltd.
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☑ (b)
3	SEC use only
4	Source of funds (See Instructions) WC
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐
6	Citizenship or place of organization CAYMAN ISLANDS

Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 1,529,566.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 1,529,566.00

11	Aggregate amount beneficially owned by each reporting person

	1,529,566.00
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐
13	Percent of class represented by amount in Row (11) 16.4 %
14	Type of Reporting Person (See Instructions) CO

SCHEDULE 13D

CUSIP No. 04746L203

1	Name of reporting person Perceptive Xontogeny Venture Fund II, LP		
2	Check the appropriate box if a member of a Group (See Instructions) ☐ (a) ☑ (b)		
3	SEC use only		
4	Source of funds (See Instructions) WC		
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) ☐		
6	Citizenship or place of organization DELAWARE		
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00	
	8	Shared Voting Power 329,756.00	
	9	Sole Dispositive Power 0.00	
	10	Shared Dispositive Power 329,756.00	
11	Aggregate amount beneficially owned by each reporting person 329,756.00		
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) ☐		
13	Percent of class represented by amount in Row (11) 3.5 %		
14	Type of Reporting Person (See Instructions) PN		

SCHEDULE 13D

Item 1. Security and Issuer

(a) Title of Class of Securities:

Common Stock, $0.0001 par value

(b) Name of Issuer:

Athira Pharma, Inc.

(c) Address of Issuer's Principal Executive Offices:

18706 North Creek Parkway, Suite 104, Bothell, WASHINGTON , 98011.

Item 2. Identity and Background

(a) Item 2 of the Schedule 13D is amended and supplemented as follows: This Amendment No. 5 to the Schedule 13D is being filed by Perceptive Advisors, Mr. Edelman, the Master Fund and Perceptive Xontogeny Venture Fund II, LP ("PXV II," and together with Perceptive Advisors, Mr. Edelman and the Master Fund, each of the foregoing, a "Reporting Person," and collectively, the "Reporting Persons"). Perceptive Venture Advisors, LLC serves as the investment manager of PXV II and is controlled by Perceptive Advisors, and Perceptive Xontogeny Venture II GP, LLC ("PXV GP") is the general partner of PXV II. Mr. Edelman is the managing member of PXV GP and Perceptive Advisors. The agreement among the Reporting Persons to file this Schedule 13D jointly in accordance with Rule 13d-1(k) of the Securities Exchange Act of 1934, as amended, is attached as Exhibit 7 hereto.

(b) The address of the principal business office of PXV II is 51 Astor Place 10th Floor, New York, NY 10003.

(c) The principal business of PXV II is to invest in securities.

(d) During the last five years, PXV II has not been convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors).

(e) During the last five years, PXV II has not been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree of final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws, other than the previously announced settlement order entered into by Perceptive Advisors with the Securities and Exchange Commission dated September 6, 2022 (File No. 3-21031).

(f) PXV II is a Delaware limited partnership.

Item 3. Source and Amount of Funds or Other Consideration

Item 3 of the Schedule 13D is amended and supplemented as follows: The shares of Common Stock and Warrants purchased by the Master Fund and PXV II pursuant to the Securities Purchase Agreement described in Amendment No. 4 to the Schedule 13D and set forth in Item 5(c) of this Amendment No. 5 were purchased using the working capital of the Master Fund and PXV II for an aggregate purchase price of $19,998,167.53.

Item 4. Purpose of Transaction

Item 4 of the Schedule 13D is amended and supplemented as follows: The information set forth in Item 6 of this Amendment No. 5 is incorporated by reference to this Item 4.

Item 5. Interest in Securities of the Issuer

(a) Item 5 of the Schedule 13D is amended and supplemented as follows: The information set forth in rows 11 and 13 of the cover pages to this Schedule 13D is incorporated by reference. The percentages set forth in row 13 are based on an aggregate of 9,300,434 shares of Common Stock outstanding, consisting of (i) 3,943,887 shares of Common Stock outstanding as of November 5, 2025, as disclosed by the Issuer in its Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (the "SEC") on November 6, 2025, and (ii) 5,356,547 shares of Common Stock issued in the Private Placement.

(b) The information set forth in rows 7 through 10 of the cover pages to this Schedule 13D is incorporated by reference. Mr. Edelman's cover page includes 9,728 shares of Common Stock that may be acquired upon the exercise of vested options awarded to Mr. Edelman in connection with his role as a director of the Issuer. As of the date hereof, the Beneficial Ownership Limitation does not permit the Master Fund or PXV II to exercise any of their Warrants.

(c) On December 18, 2025, the Master Fund and PXV II acquired 989,270 shares and 329,756 shares of Common Stock, respectively, at a purchase price of $6.35 per share, 1,372,935 and 457,645 Pre-Funded Warrants, respectively, at a purchase price of $6.349 per share, 3,838,583 and 1,279,526 Series A Warrants and 3,543,307 and 1,181,101 Series B Warrants, respectively, pursuant to the transactions contemplated by the Securities Purchase Agreement. Except for the transactions described in this Item 5(c), none of the Reporting Persons has effected any transaction in shares of Common Stock since the filing of Amendment No. 4 to the Schedule 13D, filed with the Securities and Exchange Commission on December 22, 2025.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer

Item 6 of the Schedule 13D is amended and supplemented as follows: In connection with the closing of the transactions contemplated by the Securities Purchase Agreement, on December 23, 2025, the Master Fund and PXV II entered into a registration rights agreement (the "Registration Rights Agreement") with the Issuer pursuant to which the Issuer agreed to prepare and file a registration statement to register the resale of the shares of Common Stock and shares underlying Warrants purchased pursuant to the Securities Purchase Agreement within thirty calendar days after the date of the Closing and to use reasonable best efforts to have the registration statement declared effective at the earliest possible date but no later than the earlier of (a) seventy-five calendar days after the filing date if the SEC notifies the Issuer that it will review the registration statement and (b) the fifth business day after the Issuer is notified by the SEC that the registration statement will not be reviewed or will not be subject to further review. If the Issuer fails to meet certain of the requirements in the Registration Rights Agreement following the Closing, the Issuer will pay liquidated damages to the Master Fund and PXV II as provided in the PIPE Registration Rights Agreement. The foregoing description of the Registration Rights AGreement is qualified in its entirety by reference to the full text of the agreement, a copy of which is included as Exhibit 8 hereto.

Item 7. Material to be Filed as Exhibits.

Item 7 of the Schedule 13D is hereby amended and supplemented as follows: Exhibit 7 Joint Filing Agreement Exhibit 8 Form of Registration Rights Agreement (incorporated by reference to Exhibit 4.5 to the Issuer's Current Report on Form 8-K/A filed with the Securities and Exchange Commission on December 18, 2025)

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Perceptive Advisors LLC

Signature: /s/ Joseph Edelman
Name/Title: Joseph Edelman, Managing Member
Date: 12/23/2025

Joseph Edelman

Signature: /s/ Joseph Edelman
Name/Title: Joseph Edelman
Date: 12/23/2025

Perceptive Life Sciences Master Fund, Ltd.

Signature: /s/ Joseph Edelman
Name/Title: Joseph Edelman, Managing Member
Date: 12/23/2025

Perceptive Xontogeny Venture Fund II, LP

Signature: /s/ Joseph Edelman
Name/Title: Joseph Edelman, Managing Partner
Date: 12/23/2025

EXHIBIT 7

AGREEMENT

The persons below hereby agree that the Schedule 13D to which this agreement is attached as an exhibit, as well as all future amendments to such Schedule 13D, shall be filed on behalf of each of them. This agreement is intended to satisfy the requirements of Rule 13d-1(k)(1)(iii) under the Securities Exchange Act of 1934.

Date: December 23, 2025

PERCEPTIVE ADVISORS LLC

By: /s/ Joseph Edelman
Name: Joseph Edelman
Title: Managing Member

/s/ Joseph Edelman
JOSEPH EDELMAN

PERCEPTIVE LIFE SCIENCES MASTER FUND, LTD.

By: Perceptive Advisors LLC

By: /s/ Joseph Edelman
Name: Joseph Edelman
Title: Managing Member

PERCEPTIVE XONTOGENY VENTURE FUND II, L.P.

By: Perceptive Xontogeny Venture II GP, LLC, its general partner

By: /s/ Joseph Edelman
Name: Joseph Edelman
Title: Managing Member