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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, DC 20549

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**SCHEDULE 13D**  
(Rule 13d-101)

**Information to be Included in Statements Filed Pursuant  
to § 240.13d-1(a) and Amendments Thereto Filed  
Pursuant to § 240.13d-2(a)**

**Under the Securities Exchange Act of 1934  
(Amendment No. 2)**

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**ATEA PHARMACEUTICALS, INC.**  
(Name of Issuer)

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**Common Stock, \$0.001  
par value per share**  
(Title of Class of Securities)

**04683R106**  
(CUSIP Number)

**Bain Capital Life Sciences Investors, LLC**  
**200 Clarendon Street**  
**Boston, MA 02116**  
**617-516-2000**

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

**September 22, 2021**  
(Date of Event Which Requires Filing of This Statement)

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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.

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**Note.** Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 240.13d-7 for other parties to whom copies are to be sent.

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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, as amended (“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).

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1	Names of reporting persons Bain Capital Life Sciences Fund II, L.P.	
2	Check the appropriate box if a member of a group (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds WC	
5	Check if disclosure of legal proceedings is required pursuant to Item 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization Cayman Islands	
Number of shares beneficially owned by each reporting person with:	7	Sole voting power 0 shares of Common Stock
	8	Shared voting power 3,178,532 shares of Common Stock
	9	Sole dispositive power 0 shares of Common Stock
	10	Shared dispositive power 3,178,532 shares of Common Stock
11	Aggregate amount beneficially owned by each reporting person 3,178,532 shares of Common Stock	
12	Check if the aggregate amount in Row (11) excludes certain shares <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 3.8%	
14	Type of reporting person PN	

1	Names of reporting persons BCIP Life Sciences Associates, LP	
2	Check the appropriate box if a member of a group (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds WC	
5	Check if disclosure of legal proceedings is required pursuant to Item 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization Delaware	
Number of shares beneficially owned by each reporting person with:	7	Sole voting power 0 shares of Common Stock
	8	Shared voting power 387,127 shares of Common Stock
	9	Sole dispositive power 0 shares of Common Stock
	10	Shared dispositive power 387,127 shares of Common Stock
11	Aggregate amount beneficially owned by each reporting person 387,127 shares of Common Stock	
12	Check if the aggregate amount in Row (11) excludes certain shares <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 0.5%	
14	Type of reporting person PN	

1	Names of reporting persons BCLS II Investco, LP	
2	Check the appropriate box if a member of a group (a) <input type="checkbox"/> (b) <input type="checkbox"/>	
3	SEC use only	
4	Source of funds WC	
5	Check if disclosure of legal proceedings is required pursuant to Item 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization Delaware	
Number of shares beneficially owned by each reporting person with:	7	Sole voting power 0 shares of Common Stock
	8	Shared voting power 250,000 shares of Common Stock
	9	Sole dispositive power 0 shares of Common Stock
	10	Shared dispositive power 250,000 shares of Common Stock
11	Aggregate amount beneficially owned by each reporting person 250,000 shares of Common Stock	
12	Check if the aggregate amount in Row (11) excludes certain shares <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 0.3%	
14	Type of reporting person PN	

This Amendment No. 2 relates to the Common Stock of Atea Pharmaceuticals, Inc. and amends the initial statement on Schedule 13D filed by the Reporting Persons on November 12, 2020, as amended by Amendment No. 1 filed on September 3, 2021 (the “Initial Statement” and, as further amended by this Amendment No. 2, the “Schedule 13D”). Capitalized terms used but not defined herein shall have the meanings ascribed to them in the Initial Statement.

**Item 5. Interest in Securities of the Issuer**

Item 5 of the Initial Statement is hereby amended and restated as follows:

The information set forth in Items 2 and 3 and on the cover pages of this Schedule 13D is incorporated by reference in its entirety into this Item 5.

- (a), (b) As of the date hereof, BCLS II holds 3,178,532 shares of Common Stock, representing approximately 3.8% of the outstanding shares of Common Stock, BCIPLS holds 387,127 shares of Common Stock, representing approximately 0.5% of the outstanding shares of Common Stock, and BCLS II Investco holds 250,000 shares of Common Stock, representing approximately 0.3% of the outstanding shares of Common Stock. As a result of the foregoing and the relationships described in Item 2(a) of this Schedule 13D, the Reporting Persons may be deemed to beneficially own in the aggregate 3,815,659 shares of Common Stock, representing approximately 4.6% of the outstanding shares of Common Stock.

The percentage of the outstanding shares of Common Stock held by the Reporting Persons is based on 82,776,937 shares of Common Stock outstanding, as reported by the Issuer in its Quarterly Report on Form 10-Q for the quarter ended June 30, 2021, filed with the Securities and Exchange Commission on August 12, 2021.

- (c) On September 20, 2021, BCLS II and BCIPLS sold an aggregate of 12,181 shares of Common Stock at a price of \$30.01 per share pursuant to Rule 144 under the Securities Act of 1933, as amended, for aggregate consideration of \$365,552. In the transaction, BCLS II sold 10,858 shares of Common Stock and BCIPLS sold 1,323 shares of Common Stock.

On September 22, 2021, BCLS II and BCIPLS sold an aggregate of 937,819 shares of Common Stock at a weighted average price of \$29.63 per share pursuant to Rule 144 under the Securities Act of 1933, as amended, for aggregate consideration of \$27,791,171. In the transactions, BCLS II sold 835,998 shares of Common Stock and BCIPLS sold 101,821 shares of Common Stock.

- (d) Except as otherwise described in this Item 5, no one other than the Reporting Persons has the right to receive, or the power to direct the receipt of, dividends from, or the proceeds from the sale of, any of the Common Stock beneficially owned by the Reporting Persons as described in this Item 5.
- (e) Following the sale of shares on September 22, 2021 described in Item 5(c) above, the Reporting Persons ceased to beneficially own 5% or more of the Issuer’s outstanding shares of Common Stock.

**SIGNATURES**

After reasonable inquiry and to the best of its knowledge and belief, the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: September 24, 2021

**Bain Capital Life Sciences Fund II, L.P.**

By: Bain Capital Life Sciences Investors II, LLC,  
its general partner

By: Bain Capital Life Sciences Investors, LLC,  
its manager

By: /s/ Andrew Hack

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Name: Andrew Hack

Title: Managing Director

**BCIP Life Sciences Associates, LP**

By: Boylston Coinvestors, LLC,  
its general partner

By: /s/ Andrew Hack

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Name: Andrew Hack

Title: Authorized Signatory

**BCLS II Investco, LP**

By: BCLS II Investco (GP), LLC,  
its general partner

By: Bain Capital Life Sciences Fund II, L.P.,  
its managing member

By: Bain Capital Life Sciences Investors II, LLC,  
its general partner

By: Bain Capital Life Sciences Investors, LLC,  
its manager

By: /s/ Andrew Hack

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Name: Andrew Hack

Title: Managing Director