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SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934  
(Amendment No. 1)\*

**OLEMA PHARMACEUTICALS, INC.**

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(Name of Issuer)

**Common Stock, par value \$0.0001 per share**

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(Title of Class of Securities)

**68062P106**

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(CUSIP Number)

**01/08/2025**

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(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)  
 Rule 13d-1(c)  
 Rule 13d-1(d)

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SCHEDULE 13G

CUSIP No. 68062P106

Names of Reporting Persons

1

Bain Capital Life Sciences Opportunities IV, L.P.

Check the appropriate box if a member of a Group (see instructions)

2

(a)

(b)

3

Sec Use Only

Citizenship or Place of Organization

4

DELAWARE

	5	Sole Voting Power
		0.00
Number of Shares Beneficially Owned by Each Reporting Person With:	6	Shared Voting Power
		7,095,780.00
	7	Sole Dispositive Power
		0.00
	8	Shared Dispositive Power
		7,095,780.00
9		Aggregate Amount Beneficially Owned by Each Reporting Person
		7,095,780.00
10		Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)
		<input type="checkbox"/>
11		Percent of class represented by amount in row (9)
		9.99 %
12		Type of Reporting Person (See Instructions)
		PN

## SCHEDULE 13G

### Item 1.

Name of issuer:

(a)

OLEMA PHARMACEUTICALS, INC.

Address of issuer's principal executive offices:

(b)

780 Brannan Street, San Francisco, California 94103

### Item 2.

Name of person filing:

This Schedule 13G is being filed by Bain Capital Life Sciences Opportunities IV, L.P., a Delaware limited partnership (the "Reporting Person"). Bain Capital Life Sciences Investors, LLC, a Delaware limited liability company ("BCLSI"), is the manager of Bain Capital Life Sciences IV General Partner, LLC, a Delaware limited liability company ("BCLS Fund IV GP"), which is the general partner of Bain Capital Life Sciences Fund IV, L.P., a Delaware limited partnership ("BCLS Fund IV"), which is the sole member of Bain Capital Life Sciences Opportunities IV GP, LLC, a Delaware limited liability company (together with the Reporting Person, BCLSI, BCLS Fund IV GP and BCLS Fund IV, the "Bain Capital Life Sciences Entities"), which is the general partner of the Reporting Person. As a result, BCLSI may be deemed to share voting and dispositive power with respect to the securities held by the Reporting Person.

Address or principal business office or, if none, residence:

(b)

The principal business address for each of the Bain Capital Life Sciences Entities is 200 Clarendon Street, Boston, Massachusetts 02116.

Citizenship:

(c)

Each of the Bain Capital Life Sciences Entities is organized under the laws of the State of Delaware.

Title of class of securities:

(d)

Common Stock, par value \$0.0001 per share

CUSIP No.:

(e)

68062P106

Item 3. If this statement is filed pursuant to §§ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

- (a)  Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o);
- (b)  Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c);
- (c)  Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c);
- (d)  Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C. 80a-8);
- (e)  An investment adviser in accordance with § 240.13d-1(b)(1)(ii)(E);
- (f)  An employee benefit plan or endowment fund in accordance with § 240.13d-1(b)(1)(ii)(F);
- (g)  A parent holding company or control person in accordance with § 240.13d-1(b)(1)(ii)(G);
- (h)  A savings associations as defined in Section 3(b) of the Federal Deposit Insurance Act (12 U.S.C. 1813);
- (i)  A church plan that is excluded from the definition of an investment company under section 3(c)(14) of the Investment Company Act of 1940 (15 U.S.C. 80a-3);
- (j)  A non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J). If filing as a non-U.S. institution in accordance with § 240.13d-1(b)(1)(ii)(J), please specify the type of institution:
- (k)  Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K).

Item 4. Ownership

Amount beneficially owned:

As of the date hereof, the Reporting Person holds 4,400,000 shares of Common Stock and pre-funded warrants to purchase up to 8,013,216 shares of Common Stock. The Reporting Person is prohibited from exercising the pre-funded warrants if, as a result of such exercise, the Reporting Person would beneficially own more than 9.99% of the total number of shares of Common Stock then issued and outstanding immediately after giving effect to the exercise (the "Beneficial Ownership Blocker"). Accordingly, pursuant to Rule 13d-3 of the Act, the Reporting Person may be deemed to beneficially own 9.99% of the outstanding shares of Common Stock, representing 7,095,780 shares of Common Stock. The percentage of the outstanding shares of Common Stock held by the Reporting Person is based on (i) 68,333,065 shares of Common Stock issued and outstanding, as reported by the Issuer in its Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 10, 2025 and (ii) 2,695,780 shares of Common Stock issuable upon the partial exercise of the pre-funded warrants held by the Reporting Person, which reflects the Beneficial Ownership Blocker.

Percent of class:

(b) See Item 4(a) hereof. %

(c) Number of shares as to which the person has:

(i) Sole power to vote or to direct the vote:

0

(ii) Shared power to vote or to direct the vote:

See Item 4(a) hereof.

(iii) Sole power to dispose or to direct the disposition of:

0

(iv) Shared power to dispose or to direct the disposition of:

See Item 4(a) hereof.

Item 5. Ownership of 5 Percent or Less of a Class.

Item 6. Ownership of more than 5 Percent on Behalf of Another Person.

Not Applicable

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company or Control Person.

Not Applicable

Item 8. Identification and Classification of Members of the Group.

Not Applicable

Item 9. Notice of Dissolution of Group.

Not Applicable

Item 10. Certifications:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect, other than activities solely in connection with a nomination under § 240.14a-11.

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.

Bain Capital Life Sciences Opportunities IV, L.P.

Signature: /s/ Andrew Hack

Name/Title: Partner

Date: 01/13/2025

**Comments accompanying signature:** \* By: Bain Capital Life Sciences Opportunities IV GP, LLC, its general partner; By: Bain Capital Life Sciences Fund IV, L.P., its sole member; By: Bain Capital Life Sciences IV General Partner, LLC, its general partner; By: Bain Capital Life Sciences Investors, LLC, its manager