
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

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

X4 PHARMACEUTICALS, INC.

(Name of Issuer)

Common Stock, par value \$0.001 per share

(Title of Class of Securities)

98420X202

(CUSIP Number)

12/31/2025

(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)

SCHEDULE 13G

CUSIP No. 98420X202

Names of Reporting Persons

1 Bain Capital Life Sciences Fund, 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 CAYMAN ISLANDS

	Sole Voting Power
5	
Number of	0.00
Shares	Shared Voting Power
Beneficially	6
Owned by	0.00
Each	Sole Dispositive Power
Reporting	7
Person	0.00
With:	Shared Dispositive Power
8	
	0.00
9	Aggregate Amount Beneficially Owned by Each Reporting Person
	0.00
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)
	0 %
12	Type of Reporting Person (See Instructions)
	PN

SCHEDULE 13G

CUSIP No. 98420X202

1	Names of Reporting Persons
	Bain Capital Life Sciences Fund II, L.P.
	Check the appropriate box if a member of a Group (see instructions)
2	<input type="checkbox"/> (a)
	<input type="checkbox"/> (b)
3	Sec Use Only
4	Citizenship or Place of Organization
	CAYMAN ISLANDS
	Sole Voting Power
5	
Number of	0.00
Shares	Shared Voting Power
Beneficially	6
Owned by	64,190.00
Each	Sole Dispositive Power
Reporting	7
Person	0.00
With:	Shared Dispositive Power
8	
	64,190.00
9	Aggregate Amount Beneficially Owned by Each Reporting Person
	64,190.00
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)

0.07 %
Type of Reporting Person (See Instructions)

12

PN

SCHEDULE 13G

CUSIP No. 98420X202

Names of Reporting Persons

1

BCIP Life Sciences Associates, LP

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

Sole Voting Power

5

0.00

Number of
Shares

Shared Voting Power

Beneficially 6

Owned by

7,817.00

Each

Sole Dispositive Power

Reporting 7

Person

0.00

With:

Shared Dispositive Power

8

7,817.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

7,817.00

Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)

10

Percent of class represented by amount in row (9)

11

0.01 %

Type of Reporting Person (See Instructions)

12

PN

SCHEDULE 13G

CUSIP No. 98420X202

Names of Reporting Persons

1

BCLS II Investco, LP

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

Sole Voting Power

5

0.00

Number of Shares

Shared Voting Power

Beneficially Owned by

6

758,598.00

Each Reporting Person

7

Sole Dispositive Power

With:

8

Shared Dispositive Power

8

758,598.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

758,598.00

Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)

10

Percent of class represented by amount in row (9)

11

0.8 %

Type of Reporting Person (See Instructions)

12

PN

SCHEDULE 13G

CUSIP No. 98420X202

Names of Reporting Persons

1

BCLS I Investco, LP

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

Sole Voting Power

5

0.00

Number of Shares

Shared Voting Power

Beneficially Owned by

6

89,633.00

Each Reporting Person

7

Sole Dispositive Power

With:

8

Shared Dispositive Power

8

89,633.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

89,633.00

Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)

10

Percent of class represented by amount in row (9)
11 0.09 %
Type of Reporting Person (See Instructions)
12 PN

SCHEDULE 13G

CUSIP No. 98420X202

1 Names of Reporting Persons
BCLS II Equity Opportunities, LP
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
Sole Voting Power
5 0.00
Number of Shares Beneficially Owned by Each Reporting Person With:
6 Shared Voting Power 7,047,216.00
7 Sole Dispositive Power 0.00
8 Shared Dispositive Power 7,047,216.00
9 Aggregate Amount Beneficially Owned by Each Reporting Person
7,047,216.00
Check box if the aggregate amount in row (9) excludes certain shares (See Instructions)
10
Percent of class represented by amount in row (9)
11 7.43 %
Type of Reporting Person (See Instructions)
12 PN

SCHEDULE 13G

Item 1.

Name of issuer:

- (a) X4 PHARMACEUTICALS, INC.
Address of issuer's principal executive offices:
(b) 61 North Beacon Street, 4th Floor, Boston, Massachusetts 02134.

Item 2.

Name of person filing:

(a) This Schedule 13G is being filed jointly by Bain Capital Life Sciences Fund, L.P., a Cayman Islands exempted limited partnership ("BCLS Fund I"), Bain Capital Life Sciences Fund II, L.P., a Cayman Islands exempted limited partnership ("BCLS Fund II"), BCIP Life Sciences Associates, LP, a Delaware limited partnership ("BCIPLS"), BCLS II Investco, LP, a Delaware limited partnership ("BCLS II Investco"), BCLS I Investco, LP, a Delaware limited partnership ("BCLS I Investco"), and BCLS II Equity Opportunities, LP, a Delaware limited partnership ("BCLS II Equity" and, together with BCLS Fund I, BCLS Fund II, BCIPLS, BCLS II Investco and BCLS I Investco, the "Reporting Persons"). Bain Capital Life Sciences Investors, LLC, a Delaware limited liability company ("BCLSI"), is (i) the general partner of Bain Capital Life Sciences Partners, LP, a Cayman Islands exempted limited partnership ("BCLSP"), which is the general partner of BCLS Fund I, and (ii) the manager of Bain Capital Life Sciences Investors II, LLC, a Cayman Islands limited liability company ("BCLSI II"), which is the general partner of BCLS Fund II. Boylston Coinvestors, LLC, a Delaware limited liability company ("Boylston"), is the general partner of BCIPLS. BCLSI governs the investment strategy and decision-making process with respect to investments held by BCIPLS. BCLS II Investco (GP), LLC, a Delaware limited liability company ("BCLS II Investco GP"), whose manager is BCLS Fund II, is the general partner of BCLS II Investco. BCLS I Investco GP, LLC, a Delaware limited liability company ("BCLS I Investco GP"), whose manager is BCLS Fund I, is the general partner of BCLS I Investco. BCLS II Equity Opportunities GP, LLC, a Delaware limited liability company ("BCLS II Equity GP" and, together with the Reporting Persons, BCLSI, BCLSP, BCLSI II, Boylston, BCLS II Investco GP and BCLS I Investco GP, the "Bain Capital Life Sciences Entities"), whose manager is BCLS Fund II, is the general partner of BCLS II Equity. As a result, BCLSI may be deemed to share voting and dispositive power with respect to the securities held by the Reporting Persons. The Reporting Persons have entered into a Joint Filing Agreement, dated February 17, 2026, pursuant to which the Reporting Persons have agreed to file this Schedule 13G jointly in accordance with the provisions of Rule 13d-1(k)(1) promulgated under the Act.

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) See Item 2(a) hereof.

Title of class of securities:

(d) Common Stock, par value \$0.001 per share

CUSIP No.:

(e) 98420X202

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

(a) Amount beneficially owned:

As of December 31, 2025, (i) BCLS Fund I directly holds zero shares of Common Stock; (ii) BCLS Fund II directly holds 64,190 shares of Common Stock; (iii) BCIPLS directly holds 7,817 shares of Common Stock; (iv) BCLS II Investco directly holds 543,642 shares of Common Stock, a warrant exercisable for up to 214,956 shares of Common Stock and a Class C warrant exercisable for up to 68,818 shares of Common Stock; (v) BCLS I Investco directly holds a warrant exercisable for up to 89,633 shares of Common Stock and a Class C warrant exercisable for up to 28,696 shares of Common Stock; and (vi) BCLS II Equity directly holds a pre-funded warrant exercisable for up to 7,047,216 shares of Common Stock. BCLS II Investco, BCLS I Investco and BCLS II Equity are (i) prohibited from exercising

warrants to purchase Common Stock or pre-funded warrants to purchase Common Stock if, as a result of such exercise, the Reporting Persons would together 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 and (ii) prohibited from exercising Class C warrants to purchase Common Stock if, as a result of such exercise, the Reporting Persons would together beneficially own more than 4.99% of the total number of shares of Common Stock then issued and outstanding immediately after giving effect to the exercise (collectively, the "Beneficial Ownership Blockers"). Accordingly, pursuant to Rule 13d-3 of the Act and the relationships described herein, as of December 31, 2025, the Reporting Persons may be deemed to collectively beneficially own (i) 615,649 shares of Common Stock, (ii) a pre-funded warrant exercisable for up to 7,047,216 shares of Common Stock and (iii) warrants exercisable for up to 304,589 shares of Common Stock, together representing 8.41% of the outstanding shares of Common Stock. The calculation of the beneficial ownership of the Reporting Persons is based on (i) 87,436,688 shares of Common Stock issued and outstanding as of October 31, 2025, as reported by the Issuer in its Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 5, 2025, and (ii) 7,351,805 shares of Common Stock issuable upon the exercise of warrants and pre-funded warrants held by the Reporting Persons, which reflects the Beneficial Ownership Blockers.

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 Fund, L.P.

Signature: /s/ Andrew Hack

Name/Title: Andrew Hack, Partner of Bain Capital Life Sciences Investors, LLC

Date: 02/17/2026

Bain Capital Life Sciences Fund II, L.P.

Signature: /s/ Andrew Hack

Name/Title: Andrew Hack, Partner of Bain Capital Life
Sciences Investors, LLC

Date: 02/17/2026

BCIP Life Sciences Associates, LP

Signature: /s/ Andrew Hack

Name/Title: Andrew Hack, Authorized Signatory of Boylston
Coinvestors, LLC

Date: 02/17/2026

BCLS II Investco, LP

Signature: /s/ Andrew Hack

Name/Title: Andrew Hack, Partner of Bain Capital Life
Sciences Investors, LLC

Date: 02/17/2026

BCLS I Investco, LP

Signature: /s/ Andrew Hack

Name/Title: Andrew Hack, Partner of Bain Capital Life
Sciences Investors, LLC

Date: 02/17/2026

BCLS II Equity Opportunities, LP

Signature: /s/ Andrew Hack

Name/Title: Andrew Hack, Partner of Bain Capital Life
Sciences Investors, LLC

Date: 02/17/2026