
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G

UNDER THE SECURITIES EXCHANGE ACT OF 1934

X4 Pharmaceuticals, Inc

(Name of Issuer)

Common Stock, \$0.001 par value per share

(Title of Class of Securities)

98420X202

(CUSIP Number)

09/30/2025

(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

Empery Asset Management, 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

Number of Shares 5 Sole Voting Power

Beneficially Owned by Each Reporting Person With: 0.00
 Shared Voting Power
 6
 2,498,162.00
 Sole Dispositive Power
 7
 0.00
 Shared Dispositive Power
 8
 2,498,162.00

9 Aggregate Amount Beneficially Owned by Each Reporting Person

2,498,162.00

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

Percent of class represented by amount in row (9)

11 9.99 %

12 Type of Reporting Person (See Instructions)

IA, PN

Comment for Type of Reporting Person: ncludes 106,946 shares of Common Stock issuable upon exercise of the Warrants (as defined in Item 2(a)).

SCHEDULE 13G

CUSIP No. 98420X202

1 Names of Reporting Persons

Lane Ryan M.

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

2 (a)
 (b)

3 Sec Use Only

4 Citizenship or Place of Organization

UNITED STATES

Sole Voting Power

5 0.00

Number of Shares Beneficially Owned by Each Reporting Person With: 6 Shared Voting Power

2,498,162.00

Sole Dispositive Power

7 0.00

8 Shared Dispositive Power

2,498,162.00

9 Aggregate Amount Beneficially Owned by Each Reporting Person

2,498,162.00

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



Percent of class represented by amount in row (9)

11

9.99 %

Type of Reporting Person (See Instructions)

12

HC, IN

Comment for Type of Reporting Person: Includes 106,946 shares of Common Stock issuable upon exercise of the Warrants.

SCHEDULE 13G

CUSIP No. 98420X202

Names of Reporting Persons

1

Hoe Martin D.

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

UNITED STATES

Sole Voting Power

5

0.00

Number of

Shares

Beneficially

Owned by

Each

Reporting

Person

With:

6

Shared Voting Power

2,498,162.00

7

Sole Dispositive Power

0.00

8

Shared Dispositive

Power

2,498,162.00

Aggregate Amount Beneficially Owned by Each Reporting Person

9

2,498,162.00

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

9.99 %

Type of Reporting Person (See Instructions)

12

HC, IN

Comment for Type of Reporting Person: Includes 106,946 shares of Common Stock issuable upon exercise of the Warrants.

SCHEDULE 13G

Item 1.

(a) Name of issuer:

X4 Pharmaceuticals, Inc

Address of issuer's principal executive offices:

- (b) 61 North Beacon Street, 4th Floor, Boston, MA 02134

Item 2.

Name of person filing:

- (a) This statement is filed by the entities and persons listed below, who are collectively referred to herein as "Reporting Persons," with respect to Common Stock, par value \$0.001 per share (the "Common Stock") and Common Stock issuable upon exercise of warrants (the "Warrants") of X4 Pharmaceuticals, Inc., a Delaware corporation (the "Company"): (i) Empery Asset Management, LP (the "Investment Manager"), with respect to the Common Stock held by, and the Common Stock issuable upon exercise of the Warrants held by, funds to which the Investment Manager serves as investment manager (the "Empery Funds"); (ii) Mr. Ryan M. Lane ("Mr. Lane"), with respect to the Common Stock held by, and the Common Stock issuable upon exercise of the Warrants held by, the Empery Funds; and (iii) Mr. Martin D. Hoe ("Mr. Hoe"), with respect to the Common Stock held by, and the Common Stock issuable upon exercise of the Warrants held by, the Empery Funds. The Investment Manager serves as the investment manager to each of the Empery Funds. Each of Mr. Lane and Mr. Hoe (the "Reporting Individuals") is a Managing Member of Empery AM GP, LLC (the "General Partner"), the general partner of the Investment Manager.

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

- (b) The address of the business office of each of the Reporting Persons is: 1 Rockefeller Plaza, Suite 1205 New York, New York 10020

Citizenship:

- (c) Citizenship is set forth in Row 4 of the cover page for each Reporting Person hereto and is incorporated herein by reference for each such Reporting Person.

Title of class of securities:

- (d) Common Stock, \$0.001 par value 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:

The information required by Item 4(a) is set forth in Row 9 of the cover page for each of the Reporting Persons and is incorporated herein by reference. The percentage set forth in this Schedule 13G is calculated based upon an aggregate of 24,899,689 shares of Common Stock outstanding, including 22,449,689 shares of Common Stock outstanding as of August 13, 2025, as reported in the Company's Prospectus Supplement filed pursuant to Rule 424(b)(3) with the Securities and Exchange Commission on September 18, 2025 and 2,450,000 shares of Common Stock issued upon exercise of Warrants exercised after August 13, 2025 and prior to September 30, 2025, and assumes exercise of the Warrants (subject to the Blocker (as defined below)). Pursuant to the terms of the Warrants, the Reporting Persons cannot exercise the Warrants to the extent the Reporting Persons would beneficially own, after any such exercise, more than 9.99% of the outstanding shares of Common Stock (the "Blocker"), and the shares of Common Stock listed as beneficially owned in Rows 6, 8 and 9 of the cover page for each Reporting Person and the percentage set forth in Row 11 of the cover page for each Reporting Person give effect to the Blockers. Consequently, as of the date of the

event which requires the filing of this statement, the Reporting Persons were not able to exercise all of the Warrants due to the Blocker. The Investment Manager, which serves as the investment manager to the Empery Funds, may be deemed to be the beneficial owner of all of the Common Stock held by, and the Common Stock issuable upon exercise of the Warrants (subject to the Blocker) held by, the Empery Funds. Each of the Reporting Individuals, as Managing Members of the General Partner of the Investment Manager with the power to exercise investment discretion, may be deemed to be the beneficial owner of all of the Common Stock held by, and the Common Stock issuable upon exercise of the Warrants (subject to the Blocker) held by, by the Empery Funds. The foregoing should not be construed in and of itself as an admission by any Reporting Person as to beneficial ownership of the Common Stock owned by another Reporting Person. Each of the Empery Funds and the Reporting Individuals hereby disclaims any beneficial ownership of any such Common Stock.

Percent of class:

(b)

9.99% %

(c)

Number of shares as to which the person has:

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

The information required by Item 4(c)(i) is set forth in Row 5 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

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

The information required by Item 4(c)(ii) is set forth in Row 6 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

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

The information required by Item 4(c)(iii) is set forth in Row 7 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

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

The information required by Item 4(c)(iv) is set forth in Row 8 of the cover page for each of the Reporting Persons and is incorporated herein by reference.

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

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

If any other person is known to have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities, a statement to that effect should be included in response to this item and, if such interest relates to more than 5 percent of the class, such person should be identified. A listing of the shareholders of an investment company registered under the Investment Company Act of 1940 or the beneficiaries of employee benefit plan, pension fund or endowment fund is not required.

See Item 2(a) above.

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 acquired and are held in the ordinary course of business and 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.

Empery Asset Management, LP

Signature: /s/ Ryan M. Lane

Name/Title: By: Empery AM GP, LLC, its General Partner,
By: Ryan M. Lane, its Managing Member

Date: 10/21/2025

Lane Ryan M.

Signature: /s/ Ryan M. Lane

Name/Title: Ryan M. Lane, individually

Date: 10/21/2025

Hoe Martin D.

Signature: /s/ Martin D. Hoe

Name/Title: Martin D. Hoe, individually

Date: 10/21/2025

Comments accompanying signature: Exhibit 99.1 Joint Filing Agreement

EXHIBIT 99.1

**JOINT ACQUISITION STATEMENT
PURSUANT TO RULE 13d-1(k)**

The undersigned acknowledge and agree that the foregoing statement on Schedule 13G is filed on behalf of each of the undersigned and that all subsequent amendments to this statement on Schedule 13G shall be filed on behalf of each of the undersigned without the necessity of filing additional joint acquisition statements. The undersigned acknowledge that each shall be responsible for the timely filing of such amendments, and for the completeness and accuracy of the information concerning him or it contained therein, but shall not be responsible for the completeness and accuracy of the information concerning the others, except to the extent that he or it knows or has reason to believe that such information is inaccurate.

DATED: 10/21/2025

EMPERY ASSET MANAGEMENT, LP
By: EMPERY AM GP, LLC, its General Partner

By: /s/ Ryan M. Lane
Name: Ryan M. Lane
Title: Managing Member

/s/ Ryan M. Lane
RYAN M. LANE

/s/ Martin D. Hoe
MARTIN D. HOE