UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2026

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission File Number: 001-38295

X4 PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of incorporation or organization)**	**27-3181608** **(I.R.S. Employer Identification No.)**
61 North Beacon Street, 4th Floor **Boston, Massachusetts** **(Address of principal executive offices)**	**02134** **(Zip Code)**

(857) 529-8300
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.001 per share	**XFOR**	**The Nasdaq Stock Market LLC**

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of May 1, 2026, the registrant had 94,319,696 shares of common stock, $0.001 par value per share, outstanding.

X4 PHARMACEUTICALS INC.
TABLE OF CONTENTS

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

In this Quarterly Report on Form 10-Q, unless context otherwise requires or where otherwise indicated, the terms "X4" "we," "us," "our," and the "Company," refer to X4 Pharmaceuticals, Inc. and its subsidiaries. This Quarterly Report on Form 10-Q contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements, other than statements of historical facts, contained in this Quarterly Report on Form 10-Q, including statements regarding our plans, objectives, goals, strategies, future events, future operations, future financial position, future revenues or performance, projected costs, prospects, expectations, plans or intentions relating to clinical development, product candidates, the regulatory approval process, products and markets, and business trends and other information referred to in the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," are forward-looking statements. In some cases, these statements may be identified by such forward-looking terminology as "may," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "continue" or the negative of these terms or other comparable terminology. Our forward-looking statements are based on a series of expectations, assumptions, estimates and projections about our company, are not guarantees of future results or performance and involve substantial risks and uncertainty. We may not actually achieve the plans, intentions, or expectations disclosed in these forward-looking statements and actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements. These forward-looking statements are subject to a number of known and unknown risks, uncertainties and assumptions, including risks described in the section titled "Risk Factors" and elsewhere in this report, regarding, among other things:

- our ability to raise additional capital or achieve sufficient revenue to properly fund our business and operating plan as well as our ability to continue as a going concern;
- our expectations and goals for commercialization of XOLREMDI® (mavorixafor), which has been approved for use as an oral, once-daily therapy to increase the number of circulating mature neutrophils and lymphocytes in patients 12 years of age and older with WHIM (warts, hypogammaglobulinemia, infections, and myelokathexis) syndrome in the U.S., and that XOLREMDI, our one product approved for commercial sale, upon which we depend almost entirely to produce revenue, faces an unknown market size and growth potential, and we have not generated significant revenue from product sales to date, and we may never achieve profitability;
- the initiation, timing, progress and results of our current and future preclinical studies and clinical trials and related preparatory work and the period during which the results of the trials will become available, as well as our research and development programs;
- the potential benefits, including clinical utility, that may be derived from XOLREMDI or any of our product candidates;
- the timing of and our ability to obtain and maintain regulatory approval of our existing product XOLREMDI or any product candidates that we may develop in the future, and any related restrictions, limitations, or warnings in the label of any approved product candidates;
- our plans to research, develop, manufacture and commercialize XOLREMDI or our product candidates;
- the timing of our regulatory filings for our product candidates, along with regulatory developments in the United States and other foreign countries;
- the size and growth potential of the markets for XOLREMDI and our product candidates, if approved, and the rate and degree of market acceptance of XOLREMDI and our product candidates, including reimbursement that may be received from payors;
- the benefits of U.S. Food and Drug Administration ("FDA") and European Commission designations, including, without limitation, Fast Track, Orphan Drug and Breakthrough Therapy;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our ability to attract and retain qualified employees and key personnel;

- our competitive position and the development of and projections relating to our competitors or our industry;
- our expectations regarding our ability to obtain and maintain intellectual property protection;
- the success of competing therapies that are or may become available;
- our estimates and expectations regarding future operations, financial position, revenues, costs, expenses, uses of cash, capital requirements or our need for additional financing;
- our plans to in-license, acquire, develop and commercialize additional product candidates;
- the impact of laws and regulations;
- our plans to identify additional product candidates with significant commercial potential that are consistent with our commercial objectives;
- our strategies, prospects, plans, expectations or objectives; and
- other risks and uncertainties, including those listed under the section titled "Risk Factors" in this Quarterly Report.

You should refer to the section titled "Risk Factors" in Part I, Item 1A, "Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2025 for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. As a result of these factors, we cannot assure you that the forward-looking statements in this Quarterly Report will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Quarterly Report.

PART I FINANCIAL INFORMATION

Item 1. Financial Statements.

X4 PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)
(unaudited)

	March 31, 2026	December 31, 2025
ASSETS		
Current assets:		
Cash and cash equivalents	$ 216,908	$ 217,049
Accounts receivable	1,113	573
Marketable securities	16,812	35,949
Inventory	4,637	4,479
Prepaid expenses and other current assets	2,512	3,527
Total current assets	241,982	261,577
Property and equipment, net	146	182
Goodwill	17,351	17,351
Intangible asset, net	9,063	9,250
Right-of-use assets	1,035	1,409
Other assets	704	692
Total assets	$ 270,281	$ 290,461
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 5,073	$ 5,696
Accrued expenses	17,055	18,603
Deferred revenue	910	464
Current portion of lease liability	733	994
Total current liabilities	23,771	25,757
Long-term debt, including accretion, net of discount	76,520	76,291
Warrant liability	897	977
Deferred revenue	117	621
Other liabilities	526	525
Total liabilities	101,831	104,171
Commitments and contingencies (Note 10)		
Stockholders' equity:		
Preferred stock, $0.001 par value. 10,000,000 shares authorized and no shares issued and outstanding as of March 31, 2026 and December 31, 2025, respectively	—	—
Common stock, $0.001 par value, 500,000,000 shares authorized as of March 31, 2026 and December 31, 2025, respectively; 94,319,696 and 90,906,920 shares issued and outstanding as of March 31, 2026 and December 31, 2025, respectively	94	91
Additional paid-in capital	783,273	780,862
Accumulated other comprehensive loss	(122)	(109)
Accumulated deficit	(614,795)	(594,554)
Total stockholders' equity	168,450	186,290
Total liabilities and stockholders' equity	$ 270,281	$ 290,461

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

X4 PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE (LOSS) INCOME

(In thousands, except share and per share amounts)

(unaudited)

	Three Months Ended March 31,	
	2026	**2025**
License and other revenue	$ 239	$ 27,865
Product revenue, net	2,469	942
Total revenue	2,708	28,807
Costs and operating expenses:		
Cost of revenue	598	4,716
Research and development	15,450	18,513
General and administrative	6,966	15,021
Total operating expense	23,014	38,250
Loss from operations	(20,306)	(9,443)
Other (expense) income, net:		
Interest income	2,105	1,025
Interest expense	(2,134)	(2,201)
Change in fair value of warrant liability	80	10,830
Other income, net	14	105
Total other income, net	65	9,759
(Loss) income before provision for income taxes	(20,241)	316
Provision for income taxes	—	34
Net (loss) income	$ (20,241)	$ 282
Net (loss) income per share: basic	$ (0.16)	$ 0.04
Weighted average shares outstanding: basic	126,288,723	6,840,035
Net (loss) income per share: diluted	$ (0.16)	$ 0.04
Weighted average shares outstanding: diluted	126,288,723	6,869,084
Other comprehensive (loss) income, net of tax:		
Net (loss) income	$ (20,241)	$ 282
Change in net unrealized gains on marketable debt securities	(13)	(6)
Comprehensive (loss) income	$ (20,254)	$ 276

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

X4 PHARMACEUTICALS, INC.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In thousands, except share amounts)

(Unaudited)

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2024	5,698,231	$ 6	$ 537,620	$ (122)	$ (515,355)	$ 22,149
Vesting of restricted stock units	90,514	—	—			—
Stock-based compensation expense			519			519
Unrealized loss on marketable securities				(6)		(6)
Net income					282	282
Balance at March 31, 2025	5,788,745	$ 6	$ 538,139	$ (128)	$ (515,073)	$ 22,944

	Common Stock		Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
Balance at December 31, 2025	90,906,920	$ 91	$ 780,862	$ (109)	$ (594,554)	$ 186,290
Vesting of restricted stock units	12,776	—	—			—
Exercise of prefunded warrants	3,400,000	3	(2)			1
Stock-based compensation expense			2,413			2,413
Unrealized loss on marketable securities				(13)		(13)
Net loss					(20,241)	(20,241)
Balance at March 31, 2026	94,319,696	$ 94	$ 783,273	$ (122)	$ (614,795)	$ 168,450

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

X4 PHARMACEUTICALS, INC.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)
(Unaudited)

	Three Months Ended March 31,	
	2026	**2025**
Cash flows from operating activities:		
Net (loss) income	$ (20,241)	$ 282
Adjustments to reconcile net (loss) income to net cash used in operating activities:		
Stock-based compensation expense	2,413	519
Depreciation and amortization expense	223	476
Non-cash lease expense	374	413
Accretion of debt discount	230	225
Change in fair value of warrant liability	(80)	(10,830)
Other	(106)	(173)
Changes in operating assets and liabilities:		
Accounts receivable	(541)	561
Inventory	(158)	(272)
Prepaid expenses, other current and non-current assets	778	201
Accounts payable	(624)	2,476
Accrued expenses and other long-term liabilities	(1,549)	(7,782)
Deferred revenue	(59)	1,810
Lease liabilities	(259)	(274)
Net cash used in operating activities	(19,599)	(12,368)
Cash flows from investing activities:		
Acquisition of intangible asset	—	(3,000)
Purchase of marketable securities	—	(11,888)
Sales and maturities of marketable securities	19,252	11,750
Net cash provided by (used in) investing activities	19,252	(3,138)
Cash flows from financing activities:		
Proceeds from exercise of pre-funded warrants	2	—
Net cash provided by financing activities	2	—
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(20)	72
Net decrease in cash, cash equivalents and restricted cash	(365)	(15,434)
Cash, cash equivalents and restricted cash at beginning of period	217,852	56,475
Cash, cash equivalents and restricted cash at end of period	$ 217,487	$ 41,041

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

1. Description of Business and Summary of Significant Accounting Policies

X4 Pharmaceuticals Inc., together with its subsidiaries (the "Company"), is a biopharmaceutical company developing and commercializing novel therapeutics for the treatment of rare hematology diseases. The Company continues to progress its global, pivotal Phase 3 clinical trial, (the "4WARD" trial) to evaluate the efficacy, safety, and tolerability of oral, once-daily mavorixafor (with or without stable doses of granulocyte colony-stimulating factor ("G-CSF")) in people with congenital, acquired primary autoimmune, or idiopathic chronic neutropenia ("CN") who are experiencing recurrent and/or serious infections. The 52-week trial is a randomized, double-blind, placebo-controlled, multicenter study aiming to enroll up to 176 patients, with full enrollment expected by the end of the third quarter of 2026. The U.S. Food and Drug Administration ("FDA") has granted Fast Track designation to mavorixafor for the treatment of CN, which is defined as periods lasting more than three months persistently or intermittently where there are abnormally low levels of neutrophils circulating in the blood, and may be idiopathic (of unknown origin), cyclic (episodes typically occurring every three weeks), or congenital (of genetic causation). CN disorders are rare blood conditions similarly characterized by increased risks of infections and cancer due to abnormally low levels of neutrophils in the body. In all cases, the CXCL12/CXCR4 pathway is the key regulator of neutrophil release from the bone marrow. The Company has one commercially approved product, XOLREMDI ® (mavorixafor), which has received accelerated approval in the United States from the FDA for use as an oral, once-daily therapy in patients 12 years of age and older with WHIM (warts, hypogammaglobulinemia, infections, and myelokathexis) syndrome, to increase the number of circulating mature neutrophils and lymphocytes. WHIM syndrome is a rare combined primary immunodeficiency and chronic neutropenic disorder. The Company is committed to making XOLREMDI available to patients in need in the U.S. while maintaining its focus on its long-term strategy to successfully complete the 4WARD trial in patients with moderate and severe CN. The Company is headquartered in Boston, Massachusetts.

Basis of Presentation

The accompanying unaudited interim condensed consolidated financial statements as of and for the three months ended March 31, 2026 and 2025, respectively have been prepared in accordance with accounting principles generally accepted in the U.S. for interim financial information and with the instructions to the Quarterly Report on Form 10-Q and Article 10 of Regulation S-X. Accordingly, certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP") have been condensed or omitted pursuant to such rules and regulations. However, the Company believes that the disclosures are adequate to make the information presented not misleading. In the opinion of management, all adjustments, consisting only of normal recurring adjustments as necessary, for the fair statement of the Company's condensed financial position, condensed results of its operations and cash flows have been made. Operating results for the three months ended March 31, 2026 are not necessarily indicative of the results that may be expected for the entire year or for any other subsequent interim period.

These unaudited interim condensed consolidated financial statements should be read in conjunction with the Company's audited financial statements and the notes thereto for the year ended December 31, 2025 included in its Annual Report on Form 10-K filed with the Securities and Exchange Commission ("SEC") on March 17, 2026. The condensed consolidated balance sheet at December 31, 2025 that is presented in these interim condensed consolidated financial statements was derived from audited financial statements but does not include all disclosures required by GAAP.

Principles of Consolidation

The condensed consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries, including X4 Pharmaceuticals (Austria) GmbH, which is incorporated in Vienna, Austria, and X4 Therapeutics, Inc. All intercompany accounts and transactions have been eliminated.

Use of Estimates

The preparation of the Company's condensed consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements, and the reported amounts of expenses during the reporting period. Significant estimates and assumptions reflected in these condensed consolidated financial statements include, but are not limited to, the accrual of research and development expenses, the accrual of operational and financial license milestones, the accrual of reserves for variable consideration related to product revenue, and the impairment or lack of impairment of long-lived assets including operating lease right-of-use assets and goodwill. The Company bases its estimates on historical experience, known trends and other market-specific or other relevant factors that it believes to be reasonable under the

circumstances. On an ongoing basis, management evaluates its estimates when there are changes in circumstances, facts and experience. Changes in estimates are recorded in the period in which they become known. As of the date of issuance of these condensed consolidated financial statements, the Company is not aware of any specific event or circumstance that would require the Company to update its estimates, assumptions and judgments or revise the carrying value of its assets or liabilities. Actual results could differ from those estimates, and any such differences may be material to the Company's condensed consolidated financial statements.

Liquidity

The Company has evaluated whether there are certain conditions and events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that the condensed consolidated financial statements are issued. Although the Company has an approved drug product, licensing and sales of the Company's drug product over the next 12 months will not be sufficient to fund the Company's operating expenses. Since inception, the Company has incurred significant operating losses and negative cash flows from operations, and the Company expects to continue to generate operating losses and negative cash flows from operations for the foreseeable future. For the three months ended March 31, 2026, the Company's net loss was $20.2 million and net cash used in operating activities was $19.6 million. As of March 31, 2026, the Company had $233.7 million of cash, cash equivalents and short-term marketable securities, and an accumulated deficit of $614.8 million.

Based on its current operating plan, the Company believes (a) that its current cash, cash equivalents and short-term marketable securities will be sufficient to fund its operations for at least the next 12 months and (b) it will continue to comply with all covenants under the Hercules Loan Agreement, as defined and further described in Note 8, through at least the 12-month period from the issuance date of these condensed consolidated financial statements.

The Company is subject to risks common to companies in the biopharmaceutical industry including, but not limited to, uncertainties relating to conducting preclinical and clinical research and development, the manufacture and supply of products and product candidates for clinical and commercial use, obtaining and maintaining regulatory approvals and pricing and reimbursement for its products and product candidates, market acceptance, managing global growth and operating expenses, availability of additional capital, competition, obtaining and enforcing patents, stock price volatility, dependence on collaborative relationships and third-party service providers, dependence on key personnel, and from time to time government investigations, litigation, and potential product liability claims.

Significant Accounting Policies

The Company's significant accounting policies are disclosed in the audited consolidated financial statements and the notes thereto in the Company's Annual Report on Form 10-K for the year ended December 31, 2025 filed with the SEC on March 17, 2026. Since the date of those consolidated financial statements, there have been no material changes to the Company's significant accounting policies.

Restricted Cash

(in thousands)	As of March 31, 2026	As of December 31, 2025
Letter of credit security: Vienna Austria lease	$ —	$ 224
Letter of credit security: Boston lease	579	579
Total restricted cash	$ 579	$ 803

In connection with the Company's lease agreements for its facilities in Boston, Massachusetts, the Company maintains a letter of credit, which is secured by restricted cash, for the benefit of the respective landlord. As of December 31, 2025, restricted cash related to the Company's former Vienna, Austria lease, which the Company terminated effective November 30, 2025, is included in other current assets and was subsequently converted to unrestricted cash during the three months ended March 31, 2026. Restricted cash related to the Boston lease is also included in other current assets.

In accordance with the Company's Hercules Loan Agreement, the Company at all times must maintain a minimum level of cash of $15.0 million in an account or accounts in which Hercules has a first priority security interest.

Cash, Cash Equivalents, Restricted Cash and Marketable Securities

The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported within the condensed consolidated balance sheets to the total of amounts shown in the Company's condensed consolidated statements of cash flows as of March 31, 2026 and December 31, 2025:

(in thousands)	March 31, 2026	December 31, 2025
Cash and cash equivalents	$ 216,908	$ 217,049
Restricted cash, current (included within prepaid expenses and other current assets)	579	803
Total cash, cash equivalents and restricted cash	$ 217,487	$ 217,852

The Company's cash equivalents consisted of money market funds invested in U.S. Treasury securities. The money market funds were valued based on quoted prices in active markets for identical assets, which represents a Level 1 measurement. All marketable securities are classified as short-term investments as all are due within one year and include investments in U.S. Treasury notes, U.S. Treasury bills and federal government agency notes. The amortized cost of each investment, individually and in aggregate, approximated fair value. The Company has evaluated each marketable security for impairment that is other-than-temporary and concluded that no marketable security was impaired as of March 31, 2026 and December 31, 2025.

	Fair Value Measurements as of March 31, 2026 Using:			
(in thousands)	Level 1	Level 2	Level 3	Total
Cash equivalents—money market funds	$ 214,009	$ —	$ —	$ 214,009
Marketable securities— U.S. Treasury notes, U.S. Treasury bills, and federal government agency notes	—	16,812	—	16,812
	$ 214,009	$ 16,812	$ —	$ 230,821

	Fair Value Measurements as of December 31, 2025 Using:			
(in thousands)	Level 1	Level 2	Level 3	Total
Cash equivalents—money market funds	$ 123,838	$ —	$ —	$ 123,838
Marketable securities—U.S. Treasury notes, U.S. Treasury bills, and federal government agency notes	—	35,949	—	35,949
	$ 123,838	$ 35,949	$ —	$ 159,787

The following table provides amortized cost, unrealized gains and losses and the carrying amount of available-for-sale debt marketable securities as of March 31, 2026:

(in thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury securities	$ 3,991	$ —	$ —	$ 3,991
Federal Government Agency securities	12,824	—	3	12,821
Total available-for-sale debt securities	$ 16,815	$ —	$ 3	$ 16,812

The following table provides amortized cost, unrealized gains and losses and the carrying amount of available-for-sale debt marketable securities as of December 31, 2025:

(in thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury securities	$ 7,959	$ 3	$ —	$ 7,962
Federal Government Agency securities	27,980	11	4	27,987
Total available-for-sale debt securities	$ 35,939	$ 14	$ 4	$ 35,949

Liabilities Measured at Fair Value

The following tables present information about the Company's financial liabilities measured at fair value on a recurring basis and indicate the level of the fair value hierarchy used to determine such fair values:

	Fair Value Measurements as of March 31, 2026 Using:			
(in thousands)	Level 1	Level 2	Level 3	Total
Liabilities:				
Embedded derivative liability	$ —	$ —	$ 10	$ 10
Class C warrant liability	—	—	897	897
	$ —	$ —	$ 907	$ 907

	Fair Value Measurements as of December 31, 2025 Using:			
(in thousands)	Level 1	Level 2	Level 3	Total
Liabilities:				
Embedded derivative liability	$ —	$ —	$ 10	$ 10
Class C warrant liability	—	—	977	977
	$ —	$ —	$ 987	$ 987

The following table provides a roll-forward for the three months ended March 31, 2026 of the aggregate fair values of financial instruments for which fair values are determined using Level 3 inputs:

(in thousands)	Embedded Derivative Liability	Class C Warrant Liability	Total
Balance as of December 31, 2025	$ 10	$ 977	$ 987
Change in fair value	—	80	80
Balance as of March 31, 2026	$ 10	$ 897	$ 907

Valuation of Embedded Derivative Liability— The fair value of the embedded derivative liability recognized in connection with the Company's Hercules Loan Agreement, which is associated with additional fees due to Hercules upon non-credit related events of default, was determined based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy. The fair value of this embedded derivative liability, which is reported within other non-current liabilities on the condensed consolidated balance sheets, is estimated by the Company at each reporting date based, in part, on the results of third-party valuations, which were prepared based on a discounted cash flow model that considered the timing and probability of occurrence of a redemption upon an event of default, the potential amount of prepayment fees or contingent interest upon an event of default and the Company's risk-adjusted discount rate of 17%. As of March 31, 2026 and December 31, 2025, the fair value of this derivative liability was $10 thousand.

Class C Warrant Liability— In December 2022, the Company issued Class C Warrants for the purchase of shares of its common stock in a public offering. The Class C Warrants are accounted for as a liability on the condensed consolidated balance sheet and are adjusted to fair value at period end through "change in fair value of warrant liability" on the condensed consolidated statements of operations and comprehensive (loss) income.

The Company calculated the fair value of the Class C Warrants using the Black-Scholes option pricing model, with the following inputs:

	March 31, 2026	December 31, 2025
Common stock price	$4.13	$4.00
Risk-free interest rate	3.8 %	3.5 %
Expected term (in years)	1.7	1.9
Expected volatility	138.1 %	136.0 %
Expected dividend yield	— %	— %

Net (Loss) Income Per Share

Basic net (loss) income per common share is calculated based on net (loss) income divided by the weighted average number of shares outstanding for the period. The calculation of diluted loss per common share excludes the impact of potential common stock as their inclusion would be to reduce net loss per common share and are thus antidilutive. The calculation of diluted income per share includes the impact of dilutive securities as described below.

Basic and diluted net (loss) income per share was calculated as follows:

	Three Months Ended March 31,	
(in thousands, except share and per share data)	**2026**	**2025**
Numerator:		
Net (loss) income	$ (20,241)	$ 282
Denominator:		
Weighted average shares outstanding—basic	126,288,723	6,840,035
Net (loss) income per share— basic	$ (0.16)	$ 0.04
Effective of dilutive securities		
Time-based restricted stock units	—	14,328
Employee stock purchase plan	—	14,721
Dilutive potential common shares	—	29,049
Weighted average shares outstanding-—diluted	126,288,723	6,869,084
Net (loss) income per share— diluted	$ (0.16)	$ 0.04

Basic and diluted weighted average shares of common stock outstanding for the three months ended March 31, 2026 and 2025 includes the weighted average effect of pre-funded warrants for the purchase of shares of common stock, for which the remaining unfunded exercise price is less than or equal to $0.03 per share.

For the three months ended March 31, 2026, during which the Company recorded net loss, the Company's potentially dilutive securities included outstanding stock options, unvested restricted stock units and warrants to purchase shares of common stock. These potentially dilutive securities have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share, and thus they are considered "anti-dilutive." Therefore, the weighted average number of common shares outstanding used to calculate both basic and diluted net loss per share is the same for this period.

For the three month period ended March 31, 2025, during which the Company recorded net income, the dilutive effect of outstanding stock options, restricted stock units, employee stock purchase plan shares and warrants were calculated using the treasury stock method, whereby all such awards were assumed to be exercised at the beginning of the period. The hypothetical proceeds from such exercises, including the average unrecognized stock compensation expense for outstanding stock options

and restricted stock units, were assumed to be used to purchase outstanding common stock at the average price during the period. The net share impact of dilutive securities was added to the weighted average basic common shares outstanding to calculate weighted average diluted shares outstanding.

The Company excluded the following potential shares of common stock from the computation of diluted net (loss) income per share for the periods indicated because including them would have had an anti-dilutive effect:

	Three Months Ended March 31,	
(in thousands)	**2026**	**2025**
Options to purchase shares of common stock	15,856	325
Unvested restricted stock units	54	249
Warrants to purchase shares of common stock (excluding prefunded warrants, which are included in basic shares outstanding)	2,546	2,546
	18,456	3,120

Recently Issued Accounting Standards Not Yet Adopted

In November 2024, the FASB issued ASU 2024-03, *Disaggregation of Income Statement Expenses (Topic 220)* ("ASU 2024-03") requiring that public business entities disclose additional information about specific expense categories in the notes to financial statements at interim and annual reporting periods. The amendments in ASU 2024-03 are effective for annual reporting periods beginning after December 15, 2026, and interim reporting periods beginning after December 15, 2027. The requirements in ASU 2024-03 may be applied either prospectively to financial statements issued for reporting periods after the effective date or retrospectively to any or all prior periods presented in the financial statements. The Company continues to evaluate the impact of the future adoption of ASU 2024-03 to its consolidated financial statements.

2. Strategic Restructuring Liability

In 2025, the Company implemented two strategic restructuring actions designed to sharpen operational focus and align resources with the Company's long-term strategy to successfully complete the 4WARD trial in patients with moderate and severe CN. These strategic restructuring actions resulted in an approximately 65% reduction in employee headcount.

The following table summarizes the Company's liability recognized in connection with severance benefits incurred under strategic restructuring initiatives:

(in thousands)	
Balance as of January 1, 2026	$ 1,526
Severance and other employee-related expenses (included in general and administrative expense)	37
Cash payments	(567)
Balance as of March 31, 2026 (included in accrued expenses)	$ 996

3. Revenue

Product Revenue, Net

During the three months ended March 31, 2026, the Company recorded net revenue $2.5 million for the sale of the Company's drug product in the U.S. Net product revenue was $0.9 million for the three months ended March 31, 2025.

The following table summarizes the balances and activity in each of the product reserve accounts for the three months ended March 31, 2026.

(in thousands)	Rebates and Discounts	Co-Pay Assistance	Product Returns	Total
Beginning balance at December 31, 2025	$ 418	$ 30	$ 10	$ 458
Provision related to revenue associated with sales processed in the three month period ended March 31, 2026	238	40	3	281
Adjustments related to revenue associated with sales processed in prior periods	—	—	—	—
Credits and payments made during the period	(176)	(52)	—	(228)
Balance as of March 31, 2026	$ 480	$ 18	$ 13	$ 511

The provision for contractual discounts provided to the Company's customer is recorded as a reduction of accounts receivable. The provisions for co-pay assistance payments, contractual rebates and product returns are classified within accrued expenses.

The following table provides a rollforward of accounts receivable for the three months ended March 31, 2026.

(in thousands)	Accounts Receivable
Beginning balance at December 31, 2025	$ 573
Increase in accounts receivable for drug product sales	2,852
Decrease in accounts receivable for cash collections	(2,312)
Balance as of March 31, 2026	$ 1,113

License and Other

During the first quarter of 2025, the Company entered into a license and supply agreement (the "Norgine Agreement") with Norgine Pharma UK Ltd. ("Norgine"). The Company analyzed the activities required under the Norgine Agreement and concluded that the arrangement was indicative of a vendor-customer relationship and would be accounted for under ASC 606. To date, the Company has received a one-time, non-refundable, up-front payment of €28.5 million and a regulatory milestone payment of €0.5 million, which are included the transaction price. All other future regulatory-based milestone payments, which represent variable consideration, have been fully constrained as these are not yet considered probable. The Company has also excluded from the transaction price future royalty payments that are based on units sold by Norgine and future cumulative revenue-based milestone payments under the applicable practical expedient.

Under the Norgine Agreement, the Company's promises include a) the delivery of a license, b) research and development services for certain components of WHIM clinical studies, c) research and development services for the global Phase 3 trial of XOLREMDI for CN, and d) the option for delivery of commercial drug supply.

The following table summarizes the allocation of transaction price to the performance obligations under the Norgine Agreement based on the weighting of estimated stand-alone selling price for these performance obligations at the inception of the agreement.

(in thousands)		Revenue Recognized Three Months Ended March 31,	
Performance Obligation:	Allocation of Transaction Price	2026	2025
License	$ 27,639	$ —	$ 27,639
Research and development services: WHIM	312	—	17
Research and development services: CN	1,724	58	209
Drug product supply	181	181	—
Total	$ 29,856	$ 239	$ 27,865

The following table provides a rollforward of deferred revenue three months ended March 31, 2026.

(in thousands)	Deferred Revenue
Beginning balance at December 31, 2025	$ 1,085
Decrease in deferred revenue for revenue recognized	(58)
Balance as of March 31, 2026	$ 1,027

As of March 31, 2026, deferred revenue related to the Norgine Agreement was $1.0 million, of which $0.9 million was current.

4. Inventory

Inventory consists of the following:

(in thousands)	March 31, 2026	December 31, 2025
Raw materials	$ 1,432	1,382
Work in process	2,601	2,518
Finished goods	604	579
Total inventory	$ 4,637	$ 4,479

5. Property and Equipment

Property and equipment, net consisted of the following:

(in thousands)	March 31, 2026	December 31, 2025
Leasehold improvements	$ 228	$ 228
Furniture and fixtures	1,081	1,035
Computer equipment	134	134
Lab equipment	—	17
	1,443	1,414
Less: Accumulated depreciation	(1,297)	(1,232)
	$ 146	$ 182

Depreciation expense related to property and equipment was approximately $36 thousand and $289 thousand for the three months ended March 31, 2026 and 2025, respectively.

6. Intangible Assets, Net

As of March 31, 2026, the Company's net definite-lived intangible assets, which is comprised of the capitalization of certain milestone payments made or accrued related to its license agreement for the intellectual property contained in its drug product, included a gross intangible asset of $10.5 million, less accumulated amortization of $1.4 million for a net intangible asset of $9.1 million. The Company amortizes the intangible asset to cost of revenue over the remaining life of the underlying patent protecting the intellectual property through 2038.

As of March 31, 2026, amortization expense for the next five years and beyond is summarized as follows (in thousands):

Year	Amortization expense
2026 (remainder of year)	563
2027	750
2028	750

2029	750
2030	750
Thereafter	5,500
Total	$ 9,063

The Company began amortizing its finite-lived intangible assets in April 2024 over a 14-year period based on the expected patent exclusivity period for XOLREMDI. Amortization expense totaled $0.2 million for the three months ended March 31, 2026 and $0.2 million for the comparable prior year period. Amortization expense is recorded as a component of cost of revenue on the condensed consolidated statements of operations and comprehensive (loss) income.

7. Accrued Expenses

Accrued expenses consisted of the following:

(in thousands)	March 31, 2026	December 31, 2025
Accrued employee compensation and benefits	$ 2,993	4,303
Accrued external research and development expenses	11,642	12,235
Accrued royalty and milestone payments	165	144
Accrued professional fees	1,018	816
Other	1,237	1,105
	$ 17,055	$ 18,603

8. Long-Term Debt

Long-term debt consisted of the following:

(in thousands)	March 31, 2026	December 31, 2025
Principal amount of long-term debt	$ 75,000	$ 75,000
Debt discount, net of accretion	(349)	(412)
Cumulative accrual of end of term payments	1,869	1,703
Long-term debt	$ 76,520	$ 76,291

Hercules Loan Agreement

The Company is party to the Second Amended and Restated Loan and Security Agreement, as amended, (the "Hercules Loan Agreement") with Hercules Capital Inc., which provides for an aggregate term loan facility of up to $107.5 million, under which the Company has borrowed an aggregate of $75.0 million of term loans, representing the maximum borrowings allowable as of March 31, 2026. The Hercules Loan Agreement is described in Note 11 to the consolidated financial statements contained in the Company's Annual Report on Form 10-K filed with the SEC on March 17, 2026.

The Company recognized interest expense under the Hercules Loan Agreement as follows:

(in thousands)	Three Months Ended March 31, 2026	2025
Total interest expense	$ 2,133	$ 2,201
Non-cash interest expense	$ 230	$ 204

The annual effective interest rate on the Hercules Loan Agreement as of March 31, 2026 was 11.2%. There were no principal payments due or paid under the Hercules Loan Agreement during the three months ended March 31, 2026 and 2025. As of

March 31, 2026, future principal and accrued end-of-term payments of $76.9 million under the Hercules Loan Agreement are due on July 1, 2027.

9. Leases

The Company has a lease agreement for its facility in Boston, Massachusetts, which is the Company's principal executive office. There are no restrictions or financial covenants associated with this lease agreement. The Company had an operating lease for approximately 1,200 square meters of laboratory and office space in Vienna, Austria that commenced in February 2021 for a term of seven years. Effective November 30, 2025, the Company terminated the lease in accordance with a lease amendment entered into with the landlord. Accordingly, the Company accelerated the amortization of the right-of-use asset to zero and adjusted the remaining lease obligation to zero as of December 31, 2025.

The components of lease expense for the three months ended March 31, 2026 and 2025 were as follows:

(dollars in thousands)	Three Months Ended March 31,	
Lease Cost	**2026**	**2025**
Fixed operating lease cost	$ 400	$ 487
Total lease expense	$ 400	$ 487
Other information		
Operating cash outflows from operating leases	$ 287	348
Weighted-average remaining lease term—operating leases	0.7	2.0
Weighted-average discount rate—operating leases	11.5 %	11.5 %

Maturities of lease liabilities due under lease agreements that have commenced as of March 31, 2026 are as follows (in thousands):

Maturity of lease liabilities	Operating Leases
2026 (remainder of the year)	$ 765
Total lease payments	765
Less: interest	(32)
Total operating lease liabilities as of March 31, 2026	$ 733

10. Commitments and Contingencies

The Company has agreements with contract research organizations ("CROs") pursuant to which the Company and the CROs are conducting clinical trials. The Company may terminate these agreements by providing notice pursuant to the contractual provisions of such agreements and would incur early termination fees. The Company has agreements with contract manufacturing organizations ("CMOs") for the production of mavorixafor for use in clinical trials and for the commercial supply of XOLREMDI. The Company's agreement with the CMO who produces batches of drug substance for use in the Company's clinical and commercial drug supply contains cancellation provisions that would require the Company to pay up to the full contract value upon cancellation. As of March 31, 2026, the Company has approximately $2.1 million of such commitments in place subject to cancellation provisions.

License Agreements
See Note 5 to the Company's Annual Report on Form 10-K filed with the SEC on March 17, 2026 for a description of licensing agreements, which commit the Company to contingent milestone and royalty fees based on future operational events.

Indemnification Agreements
In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners, and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by third parties. In addition, the Company has entered into indemnification agreements with members of its board of directors and its executive officers that will require the Company

to, among other things, indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnification obligations. The Company is not currently aware of any indemnification claims and has not accrued any liabilities related to such obligations in its condensed consolidated financial statements as of March 31, 2026 or December 31, 2025.

Legal Proceedings

The Company is not a party to any litigation and does not have contingency reserves established for any litigation liabilities. At each reporting date, the Company evaluates whether or not a potential loss amount or a potential range of loss is probable and reasonably estimable under the provisions of the authoritative guidance that addresses accounting for contingencies. The Company expenses as incurred the costs related to any legal proceedings.

11. Equity Transactions

ATM Sales Agreement

The Company was a party to a Controlled Equity Offering℠ Sales Agreement ("ATM"), dated as of August 7, 2020, pursuant to which the Company offered and sold shares of its common stock through one or more investment banks. The Company sold $24.2 million of its common stock, net of offering costs, under the ATM. The Company terminated the ATM on March 30, 2026.

12. Stock-Based Compensation

As of March 31, 2026, there is an aggregate of approximately 1.4 million shares of common stock available for issuance under the Company's equity incentive plans, including 0.1 million shares of common stock remain available for issuance under the Amended and Restated 2017 Employee Stock Purchase Plan.

Stock Option Valuation

The following table presents, on a weighted average basis, the assumptions used in the Black-Scholes option-pricing model to determine the grant-date fair value of stock options granted:

	Three Months Ended March 31,	
	2026	2025
Risk-free interest rate	3.8 %	4.3 %
Expected term (in years)	6.0	6.1
Expected volatility	109.9 %	103.9 %
Expected dividend yield	0 %	0 %

As of March 31, 2026, total unrecognized compensation expense related to unvested stock options and restricted stock units was $19.8 million, which is expected to be recognized over a weighted average period of 2.9 years.

Stock Options

The following table summarizes the Company's stock option activity for the three months ended March 31, 2026:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Contractual Term (Years)	Aggregate Intrinsic Value (in thousands)
Outstanding as of December 31, 2025	12,080,718	$ 2.34	9.6	$ 28,329
Granted	3,860,000	3.99		
Forfeited and expired	(84,654)	19.73		$ —
Outstanding as of March 31, 2026	15,856,064	$ 2.65	9.4	$ 30,395
Exercisable as of March 31, 2026	850,519	$ 8.52	9.1	$ 1,765
Vested and expected to vest as of March 31, 2026	12,771,903	$ 2.72	9.4	$ 24,717

The aggregate intrinsic value of options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock to the extent the stock option had a lower exercise price. There were no options exercised in 2025 and 2024. The weighted average grant-date fair value per share of stock options granted during the three months ended March 31, 2026 and 2025 was $3.36 and $14.10, respectively.

Restricted Stock Units

The following table summarizes the Company's restricted stock unit activity for the three months ended March 31, 2026:

	Number of Shares	Weighted-Average Grant Date Fair Value
Unvested as of December 31, 2025	73,381	$ 15.48
Vested	(12,776)	9.72
Forfeited	(6,195)	16.56
Unvested as of March 31, 2026	54,410	$ 16.71

Outstanding restricted stock units include performance-based restricted stock units ("PRSUs"), which will vest based on the achievement of an operational milestone. The Company considers the achievement of the remaining operational milestone related to outstanding PRSUs to be probable. Stock-based compensation expense has been recognized for these awards using the accelerated attribution model based on the fair value of the awards as of the date of grant and management's best estimate of the date the probable operational milestone will be achieved. The Company updates its estimates related to the probability and timing of achievement of the operational milestones each period until the award either vests or is forfeited.

Stock-Based Compensation

Stock-based compensation expense was classified in the condensed consolidated statements of operations and comprehensive (loss) income as follows:

	Three Months Ended March 31,	
(in thousands)	2026	2025
Research and development expense	$ 715	$ 259
General and administrative expense	1,698	260
Total stock-based compensation	$ 2,413	$ 519

13. Income Taxes

The Company did not record a material U.S. federal, state or international provision or benefit for income taxes in its condensed consolidated statement of operations and comprehensive (loss) income for the three months ended March 31, 2026 and 2025. The Company continues to maintain a valuation allowance against all remaining net deferred tax assets. The Company believes that it is more likely than not that it will not realize a future tax benefit of these attributes as the Company expects to continue to generate operating losses. Ultimate realization of any deferred tax asset is dependent on the Company's ability to generate

sufficient future taxable income in the appropriate tax jurisdiction before the expiration of carryforward periods, if any. The Company will continue to monitor the valuation allowance assessment throughout the year.

14. Segment Information

The Company has defined its Chief Operating Decision Maker ("CODM") as the Executive Chairman. The CODM manages the Company's operations as a single operating segment, which comprises its single reportable segment, for the purposes of assessing performance and making operating decisions. The Company's focus is on the research, development and commercialization of novel therapeutics for the treatment of rare diseases. The Company's research, development and commercialization efforts are focused on its lead molecule, mavorixafor, which is being marketed in the U.S. under the trade name XOLREMDI. The CODM uses the Company's condensed consolidated net (loss) income to monitor actual results as compared to forecast in assessing segment performance and allocation of resources.

The Company derives its revenue from the sale of XOLREMDI in the U.S. and from licensed rights and product sales of mavorixafor for other non-U.S. territories. The Company recognized $2.5 million and $0.9 million of revenue from its U.S. customer and $0.2 million and $27.9 million of revenue from a customer in the United Kingdom for the three months ended March 31, 2026 and 2025, respectively.

The measure of profit for the segment is net (loss) income and consisted of the following for the three months ended March 31, 2026, and 2025:

	Three Months Ended March 31,	
(in thousands)	**2026**	**2025**
Revenue from external customers	$ 2,708	$ 28,807
Compensation expense, excluding stock-based compensation, stock appreciation rights compensation expense and severance expense	5,080	11,570
Direct research and development program expenses (X4P-001, mavorixafor)	10,396	8,412
Other segment items (a)	7,473	8,543
Net (loss) income (measure of segment profit)	$ (20,241)	$ 282

(a) Other segment items primarily include cost of revenue, non-compensation departmental costs within sales, general and administrative departments, certain unallocated external costs within research and development, stock-based compensation expense, stock appreciation rights compensation expense, severance expense, other income (expense), and provision for income taxes.

The CODM only receives and reviews information regarding segment assets at the consolidated level. Certain other entity-wide disclosures are included elsewhere in these condensed consolidated financials statements. As of March 31, 2026, the Company's single operating segment had long-lived assets, including property and equipment and right-of-use assets, of $1.2 million, which were located in the U.S. As of December 31, 2025, the operating segment's long-lived assets were $1.6 million, all of which were located in the U.S.

15. Subsequent Events

MAA Approval

In January 2025, the European Medicines Agency ("EMA") validated the Company's Marketing Authorisation Application ("MAA") for processing. On April 29, 2026, the European Commission granted marketing authorization for XOLREMDI® (mavorixafor) capsules for the treatment of patients with WHIM syndrome in the European Union.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with our condensed consolidated financial statements and related notes in "Item 1. Financial Statements." References in this report to "X4," the "Company," "we," "our" and "us" are references to X4 Pharmaceuticals, Inc. and its subsidiaries.

Overview

We are a biopharmaceutical company developing and commercializing novel therapeutics for the treatment of rare hematology diseases. We continue to progress our global, pivotal Phase 3 clinical trial, (the "4WARD" trial) to evaluate the efficacy, safety, and tolerability of oral, once-daily mavorixafor (with or without stable doses of granulocyte colony-stimulating factor ("G-CSF")) in people with congenital, acquired primary autoimmune, or idiopathic chronic neutropenia ("CN") who are experiencing recurrent and/or serious infections. The 52-week trial is a randomized, double-blind, placebo-controlled, multicenter study aiming to enroll up to 176 patients, with full enrollment expected by the end of the third quarter of 2026. The U.S. Food and Drug Administration ("FDA") has granted Fast Track designation to mavorixafor for the treatment of CN, which is defined as periods lasting more than three months persistently or intermittently where there are abnormally low levels of neutrophils circulating in the blood, and may be idiopathic (of unknown origin), cyclic (episodes typically occurring every three weeks), or congenital (of genetic causation). CN disorders are rare blood conditions similarly characterized by increased risks of infections and cancer due to abnormally low levels of neutrophils in the body. In all cases, the CXCL12/CXCR4 pathway is the key regulator of neutrophil release from the bone marrow.

We have one commercially approved product, XOLREMDI® (mavorixafor), which has received accelerated approval in the United States from the FDA for use as an oral, once-daily therapy in patients 12 years of age and older with WHIM (warts, hypogammaglobulinemia, infections, and myelokathexis) syndrome, to increase the number of circulating mature neutrophils and lymphocytes. WHIM syndrome is a rare combined primary immunodeficiency and CN disorder. We are committed to making XOLREMDI available to patients in need in the U.S. while maintaining our focus on our long-term strategy to successfully complete the 4WARD trial in patients with moderate and severe CN.

Regulatory Update and Out-License Agreements

In January 2025, the EMA validated for processing our Marketing Authorization Application seeking regulatory approval to commercialize mavorixafor for WHIM syndrome in the European Union. On April 29, 2026, the European Commission granted marketing authorization for XOLREMDI® (mavorixafor) capsules for the treatment of patients with WHIM syndrome in the European Union.

Results of Operations

The following table summarizes the results of our operations for the three months ended March 31, 2026 and 2025:

(in millions)	Three Months Ended March 31, 2026	2025	Change
Revenue	$ 2.7	$ 28.8	$ (26.1)
Cost and operating expenses:			
Cost of revenue	0.6	4.7	(4.1)
Research and development	15.5	18.5	(3.0)
General and administrative	6.9	15.0	(8.1)
Total operating expenses	23.0	38.2	(15.2)
Loss from operations	(20.3)	(9.4)	(10.9)
Total other income, net	0.1	9.7	(9.6)
(Loss) income before income taxes	(20.2)	0.3	(20.5)
Provision for income taxes	—	—	—
Net (loss) income	$ (20.2)	$ 0.3	$ (20.5)

Revenue

Product Revenue, Net

Net product sales were $2.5 million and $0.9 million for the three months ended March 31, 2026 and 2025, respectively. Net product revenue growth over the prior year quarter was primarily due to an increase in the number of patients who have been prescribed the Company's drug product. Gross-to-net adjustments were approximately 10% in the first quarter of 2026. Co-pay assistance payments and rebates to U.S. government payors have comprised the majority of our gross-to-net revenue adjustments.

License and Other

During the three months ended March 31, 2026, other revenue under our license and supply agreement (the "Norgine Agreement") with Norgine Pharma UK Ltd. ("Norgine") was comprised of $0.2 million for the provision of research and development services and delivery of drug product supply to Norgine. For the three months ended March 31, 2025, we recognized $27.6 million in license revenue in connection with the delivery of the license and $0.3 million for the provision of research and development services under the Norgine Agreement.

Operating Cost and Expenses:

Cost of Revenue

Cost of revenue primarily consists of amortization of an intangible asset related to accrued and paid milestone payments associated with our Genzyme license agreement, cost of manufacturing drug product sold, and sales-based or sublicense-based royalty payments due under our Genzyme license agreement. Cost of revenue decreased $4.1 million in the three months ended March 31, 2026, as compared to the same period in the prior year, primarily due to royalties in the prior year associated with sublicense income from our Norgine Agreement that did not reoccur in the current period.

Research and Development Expenses

Research and development expenses consist primarily of costs incurred in connection with the development of our product candidates, including employee salaries and related expenses, clinical development expenses, internal and third-party costs of manufacturing our drug products for use in our clinical trials. Research and development expenses also include costs related to compliance with regulatory requirements.

Following our strategic restructuring announced during the first quarter of 2025, substantially all of our research and development has been focused on our one product candidate, mavorixafor (X4P-001). The following table shows external costs incurred by product candidate (primarily external CRO costs) and unallocated research and development costs, primarily consisting of employee salaries and related expense for our research and development organization.

	Three Months Ended March 31,		
	2026	2025	Change
(in millions)			
Direct research and development expenses by product candidate:			
Mavorixafor (X4P-001)	$ 10.4	$ 8.4	$ 2.0
Unallocated expense	5.1	10.1	(5.0)
Total research and development expenses	$ 15.5	$ 18.5	$ (3.0)

Research and development expenses decreased by $3.0 million in the three months ended March 31, 2026 as compared to the same period in the prior year. The decrease was primarily due to lower compensation and related benefit costs as a result of strategic restructuring actions implemented in 2025 partially offset by higher clinical costs as we continue to progress our 4WARD trial.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs, including stock-based compensation, for personnel in executive, finance, and administrative functions. General and administrative expenses also include direct and allocated facility-related costs as well as professional fees for legal, patent, consulting, investor and public relations, accounting, and audit services.

General and administrative expenses decreased by $8.1 million in the three months ended March 31, 2026 as compared to the

same period in the prior year. The decrease was primarily due to a $4.0 million reduction in consulting fees, approximately $2.0 million in lower sales and marketing costs, $0.7 million of net reductions in compensation costs due to lower head count in general and administrative functions, and lower professional services costs in the current period as compared to the prior year.

Other Income (Expense), Net

	Three Months Ended March 31,		
	2026	2025	change
(in millions)			
Interest income	$ 2.1	$ 1.0	$ 1.1
Interest expense	(2.1)	(2.2)	0.1
Change in fair value of Class C warrant liability	0.1	10.8	(10.7)
Other income, net	—	0.2	(0.2)
Total other income, net	$ 0.1	$ 9.8	$ (9.7)

Other income, net, decreased approximately $9.7 million in the three months ended March 31, 2026 as compared to the same period in the prior year primarily due to lower gains in the current period on fair value adjustments related to our Class C warrants, partially offset by higher interest income on our marketable security investment portfolio.

Liquidity and Capital Resources

Sources of Liquidity

To date, we have funded our operations primarily with proceeds from sales of common stock, warrants and prefunded warrants for the purchase of our preferred stock and our common stock, sales of preferred stock, proceeds from the issuance of convertible debt and borrowings under loan and security agreements.

Public and Private Equity Offerings. Over the past several years, we have funded our operations from sales of common stock, warrants and prefunded warrants through both public offerings and private placements. For example, most recently in October 2025 we completed an underwritten public offering of approximately 52.8 million shares of our common stock and prefunded warrants to purchase up to 700,000 shares of our common stock for net proceeds of $145.6 million, after underwriting discounts and offering expenses.

ATM Sales Agreement. We were a party to a Controlled Equity Offering℠ Sales Agreement (“ATM”), dated as of August 7, 2020, pursuant to which we periodically sold shares of our common stock through one or more investment banks. We have sold $24.2 million of our common stock, net of offering costs, under the ATM. We terminated the ATM effective March 30, 2026.

Hercules Loan Agreement. We are a party to a loan and security agreement (the “Hercules Loan Agreement”), which provides for a term loan facility of up to $107.5 million, under which we have borrowed an aggregate of $75.0 million of term loans to date, representing the maximum borrowings as of March 31, 2026. The term loan facility requires that we make interest-only payments through maturity on July 1, 2027 and requires that we meet certain operational and financial covenants. See Note 11 to our Annual Report on Form 10-K as filed with the SEC on March 17, 2026 for a full description of our Hercules Loan Agreement.

Historical Cash Flows

The following table summarizes our cash flow activities for each of the periods presented:

	Three Months Ended March 31,	
	2026	2025
	(in thousands)	
Net (loss) income	$ (20.2)	$ 0.3
Adjustments to reconcile net (loss) income to net cash used in operating activities	3.0	(9.4)
Changes in operating assets and liabilities	(2.4)	(3.3)
Net cash used in operating activities	(19.6)	(12.4)
Net cash provided by (used in) investing activities	19.3	(3.1)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(0.1)	—
Net decrease in cash, cash equivalents and restricted cash	(0.4)	(15.5)
Cash, cash equivalents and restricted cash, beginning of period	217.9	56.5
Cash, cash equivalents and restricted cash, end of period	$ 217.5	$ 41.0

Operating Activities

During the three months ended March 31, 2026, net cash used in operating activities was $19.6 million, primarily resulting from our net losses of $20.2 million. Net cash used in operating activities for the three months ended March 31, 2025 was $12.4 million, primarily resulting from operating expenses of approximately $38.2 million, approximately $2.5 million in severance and related payments, and $6.1 million for the payment of our annual bonuses, partially offset by license and net product sale receipts of $31.2 million and other changes in working capital.

Investing Activities

During the three months ended March 31, 2026, cash provided by investing activities of $19.3 million was primarily due to net sales of short-term marketable securities. During the three months ended March 31, 2025, cash used in investing activities of $3.1 million was due to net investment in short-term marketable securities.

Financing Activities

There were no significant cash flows from financing activities during the three months ended March 31, 2026 and 2025.

Capital Resources

Based on our cash, cash equivalents and marketable securities on hand as of May 6, 2026 and our current operating plan, we believe that our cash, cash equivalents and marketable securities will allow us to fund operations for at least the next 12 months.

Capital Requirements

We expect to continue to incur operating losses as we advance our lead drug candidate through the 4WARD trial. Until we reach profitability, we will need to raise additional capital, which cannot be assured, to fund our operations and meet our financial obligations beyond this period. Such additional capital could be raised through a combination of equity offerings, debt financings, other third-party funding, marketing and distribution arrangements, or other collaborations and strategic alliances. If we are unable to obtain funding, we could be forced to delay, reduce, or eliminate some or all of our research and development programs, product portfolio expansion or commercialization efforts, which would adversely affect our business prospects, or we may be unable to continue operations and may need to restructure our obligations in a court-supervised process or otherwise.

Due to the numerous risks and uncertainties associated with the future sale of our approved drug product and the research, development, and commercialization of future product candidates, we are unable to estimate the exact amount of our funding requirements. Our short-term and long-term funding requirements will depend on and could increase significantly as a result of many factors, including:

- the scope, number, initiation, progress, timing, costs, design, duration, any potential delays, and results of clinical trials and nonclinical studies for our current or future product candidates, particularly our Phase 3 clinical trial of mavorixafor for the treatment of individuals with chronic neutropenic disorders;
- the outcome, timing and cost of regulatory reviews, approvals or other actions to meet regulatory requirements established by the FDA and comparable foreign regulatory authorities, including the potential for the FDA or

comparable foreign regulatory authorities to require that we perform more studies for our product candidates than those that we currently expect;

- our ability to obtain marketing approval for our product candidates;
- the cost of filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights covering our product and product candidates, including any such patent claims and intellectual property rights that we have licensed from Genzyme pursuant to the terms of our license agreement with Genzyme;
- our ability to maintain, expand and defend the scope of our intellectual property portfolio, including the cost of defending intellectual property disputes, including patent infringement actions brought by third parties against us or our product or product candidates;
- our ability to establish and maintain licensing, collaboration or similar arrangements on favorable terms and whether and to what extent we retain development or commercialization responsibilities under any new licensing, collaboration or similar arrangement;
- the success of any other business, product or technology that we acquire or in which we invest;
- the costs of acquiring, licensing or investing in businesses, product candidates and technologies;
- the effect of competing technological and market developments; and
- the costs to continue operating as a public company.

CRITICAL ACCOUNTING POLICIES AND SIGNIFICANT JUDGMENTS AND ESTIMATES

Our condensed consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States. The preparation of our condensed consolidated financial statements and related disclosures requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, costs and expenses, and the disclosure of contingent assets and liabilities in our condensed consolidated financial statements. We base our estimates on historical experience, known trends and events and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

During the three months ended March 31, 2026, there were no material changes to our critical accounting policies as reported for the year ended December 31, 2025 as part of our Annual Report on Form 10-K. See Note 1 to the unaudited interim condensed consolidated financial statements included in this Quarterly Report on Form 10-Q under the heading *Recently Issued Accounting Standards Not Yet Adopted* for new accounting pronouncements or changes to the accounting pronouncements during the three months ended March 31, 2026.

Smaller Reporting Company Status

We are a smaller reporting company ("SRC") as defined by Rule 12b-2 of the Exchange Act and Item 10(f)(1) of Regulation S-K. We may take advantage of certain of the scaled disclosures available to smaller reporting companies for so long as (i) our voting and non-voting common stock held by non-affiliates is less than $250.0 million measured on the last business day of our second fiscal quarter or (ii) our annual revenue is less than $100.0 million during the most recently completed fiscal year and our voting and non-voting common stock held by non-affiliates is less than $700.0 million measured on the last business day of our second fiscal quarter.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

As an SRC, we are not required to provide the information requested by this Item.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods

specified in the SEC's rules and forms and accumulated and communicated to our management, including our principal executive officer and principal financial officer, to allow timely decisions regarding required disclosure.

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) as of March 31, 2026, and have concluded that, based on such evaluation, our disclosure controls and procedures were effective as of March 31, 2026 at the reasonable assurance level. Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during the three months ended March 31, 2026 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II: OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we may become involved in legal proceedings or be subject to claims arising in the ordinary course of our business. We are not currently a party to any material legal proceedings and we are not aware of any pending or threatened legal proceedings against us that we believe could have a material adverse effect on our business, operating results or financial condition.

Item 1A. Risk Factors

Our business is subject to various risks, including those described in Part I, Item 1A, "Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2025. There have been no material changes from the risk factors disclosed in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2025.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3. Defaults upon Senior Securities

None.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

Rule 10b5-1 Trading Plans

During the quarter ended March 31, 2026, no director or Section 16 officer adopted, modified or terminated any Rule 10b5-1 trading arrangements or non-Rule 10b5-1 trading arrangements (in each case, as defined in Item 408(a) of Regulation S-K).

Item 6. Exhibits

Exhibit No.	Exhibit Description	Incorporated by Reference to: Form	Exhibit No.	Filing Date	File No.
3.1	Restated Certificate of Incorporation, as amended, as of September 1, 2022.	8-K	3.1	09/01/2022	001-38295
3.2	Certificate of Amendment to the Restated Certificate of Incorporation of X4 Pharmaceuticals, Inc.	8-K	3.1	04/24/2025	001-38295
3.3	Amended and Restated By-laws of the Company	8-K	3.2	11/20/2017	001-38295
4.1	Form of Common Stock Certificate	8-K	4.1	3/13/2019	001-38295
31.1*	Certification of Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
31.2*	Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.				
32.1**	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.				
101.INS*	Inline XBRL Instance Document				
101.SCH*	Inline XBRL Taxonomy Extension Schema Document				
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document				
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document				
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document				
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document				
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				

* Filed herewith
** The certification attached as Exhibit 32.1 accompanying this Quarterly Report on Form 10-Q is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Quarterly Report on Form 10-Q, irrespective of any general incorporation language contained in such filing.
@ Indicates management contract or compensatory plan.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

X4 PHARMACEUTICALS, INC.

Date: May 6, 2026

By: /s/ Adam R. Craig

Adam R. Craig, M.D., Ph.D., M.B.A.
Executive Chairman *(Principal Executive Officer)*

Date: May 6, 2026

By: /s/ David Kirske

David Kirske
Chief Financial Officer and Treasurer *(Principal Financial and Accounting Officer)*

Exhibit 31.1

CERTIFICATION

I, Adam R. Craig, M.D., Ph.D., M.B.A. certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of X4 Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 6, 2026

/s/ Adam R. Craig

Adam R. Craig, M.D., Ph.D., M.B.A.
Executive Chairman
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, David Kirske, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of X4 Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 6, 2026

/s/ David Kirske

David Kirske
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION

Pursuant to the requirement set forth in Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, (the "Exchange Act") and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. §1350), Dr. Adam Craig, Executive Chairman of X4 Pharmaceuticals, Inc. (the "Company"), and David Kirske, Chief Financial Officer of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company's Quarterly Report on Form 10-Q for the period ended March 31, 2026, to which this Certification is attached as Exhibit 32.1 (the "Quarterly Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Exchange Act; and

2. The information contained in the Quarterly Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

In Witness Whereof, the undersigned have set their hands hereto as of the 6th day of May, 2026.

/s/ Adam R. Craig /s/ David Kirske

Adam R. Craig, M.D., Ph.D., M.B.A. David Kirske

Executive Chairman Chief Financial Officer

(Principal Executive Officer) *(Principal Financial Officer and Principal Accounting Officer)*