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

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **August 2, 2023**

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

Delaware	**001-38295**	**27-3181608**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

61 North Beacon Street, 4th Floor	
Boston, Massachusetts	**02134**
(Address of principal executive offices)	**(Zip Code)**

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

Not applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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 is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter). 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. ☐

Item 1.01 Entry into a Material Definitive Agreement.

Amendment to Second Amended and Restated Loan and Security Agreement
On August 2, 2023 (the "Closing Date"), X4 Pharmaceuticals, Inc. (the "Company") and its subsidiary X4 Therapeutics, Inc. (together with the Company, the "Borrowers") entered into an amendment (the "Amendment") to the Existing Loan Agreement (as defined below) with Hercules Capital, Inc., as agent and lender, and Hercules Capital Funding IV LLC and Hercules Capital Funding Trust 2022-1, as lenders (collectively, "Hercules"), which provides for aggregate maximum borrowings of up to $115.0 million, of which $32.5 million (the "Conversion Balance") was previously outstanding under the Second Amended and Restated Loan and Security Agreement, dated as of January 6, 2023 (the "Original Closing Date"), by and among the Borrowers and Hercules (the "Existing Loan Agreement" and as amended by the Amendment, the "Amended Loan Agreement").

The Amendment upsizes the Company's existing facilities and provides for a term loan facility of up to $115.0 million, including: (i) the $32.5 million Conversion Balance, which was deemed borrowed upon entering into the Amendment, (ii) a $22.5 million tranche, which the Company drew on the Closing Date of the Amendment, (iii) an additional tranche of up to $20.0 million, which will be available in either one or two drawings following U.S. approval of mavorixafor in individuals with WHIM syndrome ("Approval") until the earlier of (A) 45 days following Approval and (B) September 30, 2024 in the case of the first drawing, and until December 15, 2024 in the case of a second drawing, (iv) an additional tranche of $7.5 million, which will be available following achievement of a certain clinical development-related milestone through the earlier of (A) 45 days following achievement of such milestone and (B) December 15, 2024 and (v) an additional tranche of up to $32.5 million, which will be available subject to approval by Hercules in its sole discretion.

Borrowings under the Amended Loan Agreement continue to bear interest at a variable rate equal to the greater of (i) 10.15% or (ii) 3.15% plus the Wall Street Journal prime rate. In an event of default (as defined in the Amended Loan Agreement) and until such event is no longer continuing, the interest rate applicable to borrowings under the Amended Loan Agreement would be increased by 4.0%.

Borrowings under the Amended Loan Agreement are repayable in monthly interest-only payments through March 1, 2025, and in equal monthly payments of principal and accrued interest from April 1, 2025 (the "Amortization Date") until the maturity date of the loans. The Amortization Date may be extended (i) to October 1, 2026, if Approval occurs on or prior to September 30, 2026, and (ii) to the maturity date if an extension pursuant to the foregoing clause (i) has occurred and no event of default occurs. The loans mature on October 1, 2026; *provided, however*, such maturity date will be extended to July 1, 2027 if the Amortization Date is extended pursuant to clause (i) of the foregoing sentence. At the Company's option, the Company may prepay all, but not less than all, of the outstanding borrowings, subject to a prepayment premium that remains unchanged from the Existing Loan Agreement – 3.0% during the first 12 months following the Original Closing Date, 2.0% during the following 12 months and 1.0% thereafter. In addition, the Amendment provides for payment by the Borrowers to Hercules of an additional fee equal to 3.5% of the aggregate principal amount of loans drawn under the Amended Loan Agreement (excluding the Conversion Balance), payable upon the earlier of maturity or the repayment in full of all obligations under the Amended Loan Agreement.

Borrowings under the Amended Loan Agreement continue to be collateralized by substantially all of the Borrowers' personal property and other assets except for their intellectual property (but including rights to payment and proceeds from the sale, licensing or disposition of the intellectual property). The affirmative and negative covenants to which the Borrowers will remain subject remain largely unchanged from the

Existing Loan Agreement. However, the Borrowers have agreed to certain updated financial and performance covenants. Prior to January 31, 2025, the Borrower must maintain Qualified Cash (as defined in the Amended Loan Agreement) in an aggregate amount equal to at least $20.0 million. On and after January 31, 2025, such amount must equal at least 20% of the aggregate principal amount of loans outstanding under the Amended Loan Agreement. The performance covenant remains unchanged from the Existing Loan Agreement – from and after January 31, 2025, the Borrower must maintain trailing six month net product revenue of at least 55% of its forecast as approved by the Company's Board of Directors (the "Performance Covenant"). However, the Performance Covenant will be waived during any period in which (i) the Borrowers maintain Qualified Cash in an aggregate amount equal to at least 75% of loans outstanding under the Amended Loan Agreement or (ii) both (x) the Company maintains a market capitalization of at least $450.0 million and (y) the Borrowers maintain Qualified Cash in an aggregate amount equal to at least 45% of loans outstanding. The Borrowers' obligations under the Amended Loan Agreement continue to be subject to acceleration upon occurrence of specified events of default, including payment default, insolvency and a material adverse change in the Borrowers' business, operations or financial or other condition.

The foregoing description of the Amendment and the Amended Loan Agreement does not purport to be complete and is qualified in its entirety by reference to the Amendment, a copy of which will be filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ending September 30, 2023.

Item 2.03 Creation of a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement of a Registrant.

The information set forth in Item 1.01 of this Current Report on Form 8-K with respect to the Amendment and the Amended Loan Agreement is incorporated by reference into this Item 2.03.

Item 7.01 Regulation FD Disclosure.

On August 3, 2023, the Company issued a press release announcing the entry of the Amendment. A copy of the press release is furnished as Exhibit 99.1 hereto and incorporated by reference herein.

The information furnished under this Item 7.01, including Exhibit 99.1, shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or subject to the liabilities of that section. The information shall not be deemed incorporated by reference into any other filing with the SEC made by the Company, regardless of any general incorporation language in such filing.

Forward-Looking Statements

This Form 8-K contains forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995, including without limitation statements regarding the Company's expectations with respect to the loan facility with Hercules and the achievement of milestones thereunder. The words "will," "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "target," "should," "would," and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various important factors, including the risks described under the caption "Risk Factors" in the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2023, which is on file with the SEC, and risks described in other filings that the Company makes with the SEC in the future. Any forward-looking statements contained in this Form 8-K speak only as of the date hereof, and the Company expressly disclaims any obligation to update any forward-looking statements, whether because of new information, future events or otherwise.

Item 9.01 **Financial Statements and Exhibits.**

Exhibit No.	Description
99.1	Press Release, dated August 3, 2023.
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

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 hereunto duly authorized.

X4 PHARMACEUTICALS, INC.

Date: August 3, 2023

By: /s/ Adam Mostafa
Adam Mostafa
Chief Financial Officer

Exhibit 99.1

X4 Pharmaceuticals Closes $115 Million Loan Facility with Hercules Capital

BOSTON, August 3, 2023 – X4 Pharmaceuticals (Nasdaq: XFOR), a leader in the discovery and development of novel small-molecule therapeutics to benefit people with rare diseases of the immune system, today announced the closing of a $115 million loan facility with Hercules Capital, Inc. (NYSE: HTGC) ("Hercules"). The company also announced that it drew down $22.5 million upon the transaction's closing.

"This expanded loan facility creates significant financial flexibility for X4 as we continue preparations for the potential commercial launch of mavorixafor in individuals with WHIM syndrome and continue to advance mavorixafor for certain chronic neutropenic disorders," said Adam Mostafa, Chief Financial Officer of X4 Pharmaceuticals. "The initial draw down not only strengthens our balance sheet on a non-dilutive basis and extends our projected cash runway into 2025, but the overall transaction also creates expanded, future optionality beyond the equity capital markets as we potentially commence product sales and monetize a priority review voucher next year."

"Hercules is very pleased to continue to support X4 and expand our partnership ahead of the potential approval and commercial launch of mavorixafor in WHIM syndrome and expected upcoming development progress in potentially treating certain chronic neutropenic disorders," said Bryan Jadot, Senior Managing Director and Head of Life Sciences at Hercules Capital. "This substantial capital commitment from Hercules aims to assist X4 in further advancing its important mission of developing and commercializing novel therapies for the treatment of rare diseases of the immune system."

The term loan facility provides for up to $115 million of term loans in the aggregate, available to be funded in multiple tranches. In addition to its initial drawdown, X4 may, for a period of time following U.S. approval of mavorixafor in individuals with WHIM syndrome, draw an additional tranche of up to $20 million. An additional tranche will be available to X4 in the amount of up to $7.5 million for a period of time following achievement of a certain clinical development-related milestone. The availability of a final tranche of up to $32.5 million in support of X4's growth initiatives is subject to the approval of the lenders. In addition, the availability of each tranche is subject to certain customary conditions to drawing. The facility refinances $32.5 million in outstanding principal indebtedness and extends the initial interest-only period and maturity of existing and future borrowings. X4 is under no obligation to draw funds in the future.

About X4 Pharmaceuticals
X4 Pharmaceuticals is a late-stage clinical biopharmaceutical company focused on the discovery and development of novel therapies for people with rare diseases of the immune system. Our lead clinical candidate is mavorixafor, a small molecule antagonist of chemokine receptor CXCR4 that is being developed as an oral, once-daily therapy. Due to its ability to increase the mobilization of mature, functional white blood cells from the bone marrow into the bloodstream, we believe that mavorixafor has the potential to provide therapeutic benefit

across a variety of chronic neutropenic disorders, including WHIM (Warts, Hypogammaglobulinemia, Infections, and Myelokathexis) syndrome, a rare, primary immunodeficiency. Following announcement of positive data from our global, pivotal, 4WHIM Phase 3 clinical trial, we are currently preparing a U.S. regulatory submission seeking approval of oral, once-daily mavorixafor in the treatment of people aged 12 years and older with WHIM syndrome. We are also currently evaluating mavorixafor in a Phase 2 clinical trial in people with certain chronic neutropenic disorders following positive results from a Phase 1b clinical trial of mavorixafor in people with congenital, idiopathic, or cyclic neutropenia. We continue to leverage our insights into CXCR4 and immune system biology at our corporate headquarters in Boston, Massachusetts and at our research center of excellence in Vienna, Austria. For more information, please visit our website at www.x4pharma.com.

Forward-Looking Statements
This press release contains forward-looking statements within the meaning of applicable securities laws, including the Private Securities Litigation Reform Act of 1995, as amended. These statements may be identified by the words “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “target,” or other similar terms or expressions that concern X4's expectations, strategy, plans, or intentions. Forward-looking statements include, without limitation, statements regarding the anticipated benefit of the term loan facility funding and achievement of related milestones; the availability of unfunded tranches in the future; X4’s plans and expected timing for its clinical and regulatory developments of mavorixafor in individuals with WHIM syndrome and certain chronic neutropenic disorders; and the plans and objectives of management for future operations and capital expenditures. Any forward-looking statements in this press release are based on management's current expectations and beliefs. Actual events or results may differ materially from those expressed or implied by any forward-looking statements contained herein, including, without limitation, risks and uncertainties related to X4’s ability to raise additional funding when needed and on acceptable terms to X4 in order to achieve its business goals, including to repay the term loan facility; the availability of future tranches under the term loan facility is dependent, in part, on the approval of the lender, achievement of certain milestones and other factors; uncertainties inherent in the initiation and completion of clinical trials and clinical development; regulatory uncertainties; X4’s ability to obtain marketing approval from the applicable regulatory authorities in any jurisdiction for mavorixafor, if approved; X4’s ability to protect its intellectual property rights; the impacts of general macroeconomic and geopolitical conditions, rising inflation, and uncertain credit and financial markets on X4’s business, clinical trials, and financial position; and other risks and uncertainties, including those described in the section entitled “Risk Factors” in X4’s Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission (SEC) on May 4, 2023, and in other filings X4 makes with the SEC from time to time. X4 undertakes no obligation to update the information contained in this press release to reflect new events or circumstances, except as required by law.

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