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): May 3, 2022

SPERO THERAPEUTICS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**001-38266**	**46-4590683**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

675 Massachusetts Avenue, 14th Floor Cambridge, Massachusetts	**02139**
(Address of principal executive offices)	**(Zip Code)**

Registrant's telephone number, including area code: (857) 242-1600

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, $0.001 par value per share	**SPRO**	**The Nasdaq Global Select Market**

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 2.05. Costs Associated with Exit or Disposal Activities.

On May 3, 2022, Spero Therapeutics, Inc. (the "Company") implemented a strategic restructuring initiative and corresponding reduction in workforce, designed to reduce costs and reallocate resources towards its clinical development programs for SPR720 and SPR206, while maintaining key personnel needed to help preserve the value of the Company's tebipenem HBr program (the "Restructuring"). The Restructuring would reduce the Company's workforce from 146 full-time employees as of December 31, 2021 to approximately 35 full-time employees. The Company estimates that it will incur approximately $8.0 million of costs in connection with the reduction in workforce related to severance pay and other related termination benefits. The Company communicated the workforce reduction on May 3, 2022 and expects the majority of the costs associated with the Restructuring to be incurred during the quarter ending June 30, 2022.

This strategic restructuring plan prioritizes advancing SPR720 and SPR206 to Phase 2 milestones and includes key deliverables through 2024, based on the Company's current cash runway.

Item 5.02. Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

Chief Operating Officer

Effective as of July 2, 2022 (the "Effective Date"), Cristina Larkin will separate from the Company as its Chief Operating Officer pursuant to the Restructuring. In connection with Ms. Larkin's separation, the Company and Ms. Larkin entered into a separation agreement (the "Larkin Separation Agreement"), dated as of May 3, 2022, and Ms. Larkin received notice pursuant to the Worker Adjustment and Retraining Notification Act of 1988 (the "WARN Act"). The Larkin Separation Agreement provides that the Company will pay Ms. Larkin provided that Ms. Larkin does not revoke the Larkin Separation Agreement within seven days of signing and returning it (the "Revocation Period") and complies with the terms of the Larkin Separation Agreement, including the release and waiver provided therein, (i) severance as a continuation of payments in an amount equal to Ms. Larkin's current annual base salary for a nine-month period, which will total $386,249.94, payable as continued salary in accordance with the Company's regular payroll dates following the Revocation Period, and (ii) a pro rated cash bonus equal to $103,282.18 for the year ending December 31, 2022, which will be paid to Ms. Larkin when the Company pays the 2022 annual bonuses to its employees in 2023, but in any event no later than March 15, 2023; in each case less all required taxes and employment-related deductions. The Larkin Separation Agreement also includes other customary provisions.

In addition, the Company and Ms. Larkin entered into a consulting agreement (the "Larkin Consulting Agreement"), dated as of May 3, 2022 and effective as of the Effective Date, pursuant to which Ms. Larkin will provide consulting services to the Company for a term of ten months following the Effective Date at a rate of $300.00 per hour. In further consideration for Ms. Larkin's services as a consultant, (i) all of Ms. Larkin's options to purchase shares of the Company's common stock and restricted stock units ("RSUs") shall continue to vest during the term of the Larkin Consulting Agreement; and (ii) after the term of the Larkin Consulting Agreement ends, all of Ms. Larkin's vested options to purchase shares of the Company's common stock and vested RSUs will continue to be exercisable for 90 days in accordance with the terms of such options and RSUs and the Company's 2017 Stock Incentive Plan, as amended (the "2017 Plan").

A copy of the Larkin Separation Agreement and Larkin Consulting Agreement will be filed as exhibits to the Company's quarterly report on Form 10-Q for the quarter ending June 30, 2022, and the foregoing descriptions are subject in all respects to the actual terms of the Larkin Separation Agreement and Larkin Consulting Agreement.

Chief Medical Officer

Effective as of the Effective Date, David Melnick, M.D. will separate from the Company as its Chief Medical Officer pursuant to the Restructuring. In connection with Dr. Melnick's separation, the Company and Dr. Melnick entered into a separation agreement (the "Melnick Separation Agreement"), dated as of May 3, 2022, and Dr. Melnick received notice pursuant to the WARN Act. The Melnick Separation Agreement provides that the Company will pay Dr. Melnick provided that Dr. Melnick does not revoke the Melnick Separation Agreement within the Revocation Period and complies with the terms of the Melnick Separation Agreement, including the release and waiver provided therein, (i) severance pay as a continuation of payments representing an amount equal to Dr. Melnick's current annual base salary for a nine-month period, which will total $374,999,94, payable as continued salary in accordance with the Company's regular payroll dates following the Revocation Period, and (ii) a pro rated cash bonus equal to $100,273.96 for the year ending December 31, 2022, which will be paid to Dr. Melnick when the Company pays the 2022 annual bonuses to its employees in 2023, but in any event no later than March 15, 2023; in each case less all required taxes and employment-related deductions. The Melnick Separation Agreement also includes other customary provisions.

In addition, the Company and Dr. Melnick entered into a consulting agreement (the "Melnick Consulting Agreement"), dated as of May 3, 2022 and effective as of the Effective Date, pursuant to which Dr. Melnick will provide consulting services to the Company for a term of ten months following the Effective Date at a rate of $11,667 per month for no more than a twenty percent (20%) work week through December 31, 2022, and thereafter at a rate of $300.00 per hour. In further consideration for Dr. Melnick's services as a consultant, (i) all of Dr. Melnick's options to purchase shares of the Company's common stock and RSUs shall continue to vest during the term of the Melnick Consulting Agreement; and (ii) after the term of the Melnick Consulting Agreement ends, all of Dr. Melnick's vested options to purchase shares of the Company's common stock and vested RSUs will continue to be exercisable for 90 days in accordance with the terms of such options and RSUs and the 2017 Plan.

A copy of the Melnick Separation Agreement and Melnick Consulting Agreement will be filed as exhibits to the Company's quarterly report on Form 10-Q for the quarter ending June 30, 2022, and the foregoing descriptions are subject in all respects to the actual terms of the Melnick Separation Agreement and Melnick Consulting Agreement.

Remarking on these departures, the Company's Chief Executive Officer, Ankit Mahadevia, M.D. said "While it will be difficult to part with these talented members of our team, we want to thank them for their important contributions to Spero as we continue to pursue our mission."

Item 8.01. Other Events.

On May 3, 2022, the Company issued a press release titled "Spero Therapeutics Announces New Strategic Direction Focusing on Advancing Promising Clinical-Stage Pipeline". A copy of the press release is filed as Exhibit 99.1 hereto and is incorporated herein by reference.

Cautionary Note Regarding Forward Looking Statements

This report, including the exhibits hereto, contains forward-looking statements. These statements include, but are not limited to, statements about the potential approval of tebipenem HBr by the U.S. Food and Drug Administration ("FDA") and the timing thereof; the potential for a partnership of the tebipenem HBr franchise; the future development and commercialization of SPR206 and SPR720; the design, initiation, timing, progress and results of the Company's preclinical studies and clinical trials and its research and development programs; management's assessment of the results of such preclinical studies and clinical trials; and the expected cost-savings from the Restructuring, the Company's anticipated expenses and its anticipated cash runway. In some cases, forward-looking statements can be identified by terms such as "may," "will," "should," "expect," "plan," "aim," "anticipate," "could," "intent," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including whether the FDA will ultimately approve tebipenem HBr and, if so, the timing of any such approval; whether the FDA will require any additional clinical data or place labeling restrictions on the use of tebipenem HBr that would add costs for us, delay approval and/or reduce the commercial prospects of tebipenem HBr; whether any third parties would be interested in partnering with us to pursue continued efforts to obtain FDA approval of tebipenem HBr, or acquiring rights to the tebipenem HBr program from us through a partnership arrangement; the COVID-19 pandemic; the Company's need for additional funding; the Company's ability to successfully implement the Restructuring; the impact of the Restructuring on the Company's business, including estimated costs related thereto; the risk that the Company may not be able to address the FDA's concerns with respect to tebipenem HBr; the lengthy, expensive, and uncertain process of clinical drug development for SPR720 and SPR206; whether results obtained in preclinical studies and clinical trials will be indicative of results obtained in future clinical trials; the Company's reliance on third parties to manufacture, develop, and commercialize its product candidates, if approved; the ability to commercialize the Company's product candidates, if approved; the Company's ability to retain key personnel; whether the Company's cash resources will be sufficient to fund its continuing operations for the periods and/or trials anticipated; and other factors discussed in the "Risk Factors" set forth in filings that the Company periodically makes with the U.S. Securities and Exchange Commission. The forward-looking statements included in this report, including the exhibits hereto, represent the Company's views as of the date of this report. The Company anticipates that subsequent events and developments will cause its views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, it specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date of this report.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

99.1	Press Release, dated May 3, 2022
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

SIGNATURE

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.

SPERO THERAPEUTICS, INC.

Date: May 3, 2022

By: /s/ Tamara Joseph
Tamara Joseph
Chief Legal Officer

Exhibit 99.1

Spero Therapeutics Announces New Strategic Direction Focusing on Advancing Promising Clinical-Stage Pipeline

Announces Immediate Cessation of Tebipenem HBr Commercialization Initiatives; Company to Shift Focus to Advancement of SPR720 and SPR206

Spero to Explore Strategic Partnerships and Other Opportunities for Tebipenem HBr

Conference Call and Live Webcast at 8:30 a.m. ET Today

CAMBRIDGE, Mass., May 3, 2022 — Spero Therapeutics, Inc. (Nasdaq: SPRO), a multi-asset clinical-stage biopharmaceutical company focused on identifying, developing and commercializing treatments in high unmet need areas involving multi-drug resistant (MDR) bacterial infections and rare diseases, today announced that it will immediately defer current commercialization activities for tebipenem HBr based on feedback from a recent Late Cycle Meeting (LCM) with the U.S. Food and Drug Administration (FDA) regarding Spero's New Drug Application (NDA) for tebipenem HBr. Although the review is still ongoing and the FDA has not yet made any final determination regarding approvability, the discussion suggested that the data package may be insufficient to support approval during this review cycle, as described below.

In connection with this development, Spero announced that it is undertaking a reduction in its workforce by approximately 75% and a restructuring of its operations to reduce operating costs and reallocate resources towards the clinical development programs of SPR720 and SPR206, while continuing engagement with the FDA on the appropriate path forward for tebipenem HBr. Based on the anticipated cost-savings of this restructuring and other assumptions, Spero anticipates it will be able to fund its planned operating expenses and capital expenditure requirements pursuant to the priorities of its strategic refocusing through late 2023.

"We are disappointed that the FDA has identified substantive review issues, and we strongly believe that tebipenem HBr would offer healthcare providers, payers and patients an important oral antibiotic alternative to IV treatment for cUTI for patients with limited oral treatment options," said Ankit Mahadevia, M.D., Chief Executive Officer of Spero Therapeutics. "After careful consideration, and in light of the current FDA position, we have made the strategic decision to transition Spero's focus and resources to supporting the clinical development of our promising clinical-stage pipeline, including SPR720, aimed at treating non-tuberculous mycobacterial lung disease, and SPR206, aimed at treating MDR gram-negative bacterial infections. Further, we will continue to engage with the FDA on the appropriate path forward for tebipenem HBr. As a result, Spero will immediately refrain from investment in near-term commercialization activities for tebipenem HBr, and instead we will restructure our business to appropriately staff our new focus going forward. We believe these actions will help preserve the ongoing viability of tebipenem HBr's development program, enabling either eventual commercialization by Spero, or commercialization through potential partnership or other opportunities."

Dr. Mahadevia continued, “While this decision was difficult, we believe it is in the best interest of the company and its shareholders. The need for antibiotic resistance solutions is more pressing than ever before, and both SPR720 and SPR206 are in clinical development stages and have shown promising results to date. SPR720’s Phase 2 clinical hold was recently lifted, enabling its continued development as an oral therapy for non-tuberculosis mycobacterium infection, a debilitating, chronic disease. We are also very pleased with the ongoing development of SPR206 as a treatment for MDR gram-negative lung infections. Finally, we believe in the long-term potential of tebipenem HBr for patients with cUTI and look forward to engaging the FDA on the best path forward to approval.”

“Spero is powered by incredibly hard-working and dedicated professionals who have made significant strides over the past year to bring the medicines in our pipeline forward and closer to patients. I would like to offer my heartfelt thanks to all our employees, especially those affected by today’s announcement, for their contributions to Spero. We are committed to treating all impacted team members with fairness and respect, consistent with our culture, and to supporting them through this transition,” concluded Dr. Mahadevia.

Tebipenem HBr has been granted Qualified Infectious Disease Product (QIDP), Fast Track and Priority Review designations for treatment of complicated urinary tract infection (cUTI), including acute pyelonephritis. The FDA set a Prescription Drug User Fee Act (PDUFA) target action date for June 27, 2022. On March 31, 2022, Spero announced that as part of the FDA’s ongoing review of Spero’s NDA for tebipenem HBr, the FDA had identified deficiencies that precluded the discussion of labeling and post-marketing requirements/commitments at such time. Spero’s LCM with the FDA was in late April 2022.

In evaluating the efficacy of tebipenem HBr in the Phase 3 (ADAPT-PO) cUTI study, the FDA conducted a separate analysis of the microbiological intent-to-treat (micro-ITT) population, relative to the prespecified analysis as set forth in the previously submitted and reviewed protocol and statistical analysis plan for ADAPT-PO. The effect of this new analysis was to reduce the number of evaluable patients in the primary analysis population compared with those resulting from the trial’s pre-specified micro-ITT population as outlined in the statistical analysis plan. As a result, the FDA considers that the pre-specified non-inferiority (NI) margin of -12.5%, was not met. Spero is continuing its dialogue with the FDA, as the company seeks a pathway forward for potential approval of tebipenem HBr.

On April 7, 2022, *The New England Journal of Medicine* published the results from the Phase 3 ADAPT-PO clinical trial, whose topline results Spero originally reported in September 2020. The article, titled “Oral Tebipenem Pivoxil Hydrobromide in Complicated Urinary Tract Infection,” is available online at The New England Journal of Medicine (NEJM).

Restructuring to Prioritize Programs and Capital Allocation

Spero ended the fourth quarter and year ended December 31, 2021 with an estimated $146.4 million in cash. Based on the restructuring and the cessation of commercialization activities for the tebipenem HBr program and assuming the repayment of amounts under the Company’s Revenue Interest Financing Agreement with certain entities managed by HealthCare Royalty Management, LLC, Spero believes that its existing cash, cash equivalents and marketable securities, together with other non-dilutive funding commitments, will be sufficient to fund its

planned operating expenses and capital expenditures pursuant to the priorities of its strategic refocusing through late 2023. During this period, the strategic refocusing prioritizes advancing SPR720 and SPR206 to Phase 2 milestones and includes key deliverables through 2024.

Conference Call and Webcast

In connection with this announcement, Spero will host a conference call and webcast today at 8:30 a.m. ET. To access the call, please dial 1-877-704-4453 (domestic) or 1-201-389-0920 (international) and refer to conference ID 13729673. The conference call will also be webcast live and a link to the webcast can be accessed here and also on Spero Therapeutics' website at ***www.sperotherapeutics.com*** in the "Investors and Media" section under "Events and Presentations." An archived webcast will be available on Spero's website for 30 days following the presentation.

For more information, visit ***https://sperotherapeutics.com***.

Tebipenem HBr Research Support

The tebipenem HBr development program has been funded in part with federal funds from the U.S. Department of Health and Human Services; Office of the Assistant Secretary for Preparedness and Response; Biomedical Advanced Research and Development Authority, under contract number HHSO100201800015C.

About Spero Therapeutics

Spero Therapeutics is a multi-asset, clinical-stage biopharmaceutical company focused on identifying, developing, and commercializing novel treatments for bacterial infections, including multidrug resistant bacterial infections and rare diseases.

- A New Drug Application for tebipenem pivoxil oral tablets (tebipenem HBr) is currently being reviewed by the FDA; tebipenem HBr is not FDA-approved.
- Tebipenem HBr is an investigational drug in the United States being developed for the treatment of complicated urinary tract infection, including pyelonephritis, caused by certain microorganisms, in adult patients who have limited oral treatment options.
- Spero Therapeutics is developing SPR720 as a novel candidate oral therapy for the treatment of a rare, orphan pulmonary disease caused by non-tuberculous mycobacterial infections.
- Spero Therapeutics also has an IV-administered next generation polymyxin product candidate, SPR206, developed from its potentiator platform, which is in development to treat MDR Gram-negative infections in the hospital setting.

Forward Looking Statements

This press release may contain forward-looking statements. These statements include, but are not limited to, statements about the potential approval of tebipenem HBr by the FDA and the timing thereof; the potential for a partnership of the tebipenem HBr franchise; the future development and

commercialization of SPR206 and SPR720; the design, initiation, timing, progress and results of Spero's preclinical studies and clinical trials and its research and development programs; management's assessment of the results of such preclinical studies and clinical trials; and the expected cost-savings from the restructuring, Spero's anticipated expenses and its anticipated cash runway. In some cases, forward-looking statements can be identified by terms such as "may," "will," "should," "expect," "plan," "aim," "anticipate," "could," "intent," "target," "project," "contemplate," "believe," "estimate," "predict," "potential" or "continue" or the negative of these terms or other similar expressions. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including whether the FDA will ultimately approve tebipenem HBr and, if so, the timing of any such approval; whether the FDA will require any additional clinical data or place labeling restrictions on the use of tebipenem HBr that would add costs for Spero, delay approval and/or reduce the commercial prospects of tebipenem HBr; whether any third parties would be interested in partnering with Spero to pursue continued efforts to obtain FDA approval of tebipenem HBr, or acquiring rights to the tebipenem HBr program from Spero through a partnership arrangement; the COVID-19 pandemic; Spero's need for additional funding; Spero's ability to successfully implement the restructuring; the impact of the restructuring on Spero's business, including estimated costs related thereto; the risk that Spero may not be able to address the FDA's concerns with respect to tebipenem HBr; the lengthy, expensive, and uncertain process of clinical drug development for SPR720 and SPR206; whether results obtained in preclinical studies and clinical trials will be indicative of results obtained in future clinical trials; Spero's reliance on third parties to manufacture, develop, and commercialize its product candidates, if approved; the ability to commercialize Spero's product candidates, if approved; Spero's ability to retain key personnel; whether Spero's cash resources will be sufficient to fund its continuing operations for the periods and/or trials anticipated; and other factors discussed in the "Risk Factors" set forth in filings that Spero periodically makes with the U.S. Securities and Exchange Commission. The forward-looking statements included in this press release represent Spero's views as of the date of this press release. Spero anticipates that subsequent events and developments will cause its views to change. However, while Spero may elect to update these forward-looking statements at some point in the future, it specifically disclaims any obligation to do so. These forward-looking statements should not be relied upon as representing Spero's views as of any date subsequent to the date of this press release.

Investor Relations Contact:
Ted Jenkins
Vice President, Investor Relations
Tjenkins@sperotherapeutics.com
(617) 798-4039

Media Contact:
Jacqueline Pomfret Kirby
Vice President, Corporate Affairs
Jkirby@sperotherapeutics.com
(617) 798-4074