Filed pursuant to Rule 424(b)(3)
Registration No. 333-252589

PROSPECTUS SUPPLEMENT NO. 4
(to Prospectus dated February 9, 2021)

Vincerx Pharma, Inc.

Up to 6,112,884 Shares of Common Stock
Up to 6,851,883 Shares of Common Stock Issuable Upon Exercise of Warrants
Up to 3,570,000 Private Warrants

This prospectus supplement supplements the prospectus dated February 9, 2021 (the "Prospectus"), which forms a part of our registration statement on Form S-1 (No. 333-252589). This prospectus supplement is being filed to update and supplement the information in the Prospectus with the information contained in our current report on Form 8-K, filed with the Securities and Exchange Commission on April 20, 2021 (the "Current Report"). Accordingly, we have attached the Current Report to this prospectus supplement.

The Prospectus and this prospectus supplement relate to the issuance by us of up to an aggregate of 6,851,883 shares of our common stock, $0.0001 par value per share, which consists of: (i) up to 3,570,000 shares of common stock that are issuable upon the exercise of 3,570,000 private warrants originally issued in a private placement in connection with the initial public offering of LifeSci Acquisition Corp., or LSAC; and (ii) up to 3,281,883 shares of common stock that are issuable upon the exercise of 6,563,767 public warrants originally issued in the initial public offering of LSAC.

The Prospectus and this prospectus supplement also relate to the offer and sale from time to time by the selling securityholders named in the Prospectus or their donees, pledgees, transferees or other successors in interest, of: (i) up to 9,682,884 shares of common stock (including up to 3,570,000 shares of common stock that may be issued upon exercise of the private warrants and 2,034,130 shares of common stock that may become issuable as Earnout Shares (as defined in the Prospectus)); and (ii) up to 3,570,000 private warrants.

Our common stock and public warrants are listed on the Nasdaq Capital Market under the symbols "VINC" and "VINCW," respectively. On April 19, 2021, the closing price of our common stock was $17.22 and the closing price of our public warrants was $2.87.

This prospectus supplement updates and supplements the information in the Prospectus and is not complete without, and may not be delivered or utilized except in combination with, the Prospectus, including any amendments or supplements thereto. This prospectus supplement should be read in conjunction with the Prospectus and if there is any inconsistency between the information in the Prospectus and this prospectus supplement, you should rely on the information in this prospectus supplement.

See the section entitled "*Risk Factors*" beginning on page 9 of the Prospectus to read about factors you should consider before buying our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the Prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is April 20, 2021.

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): April 20, 2021

Vincerx Pharma, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**001-39244**	**83-3197402**
(State or Other Jurisdiction of Incorporation)	**(Commission File Number)**	**(I.R.S. Employer Identification No.)**

260 Sheridan Avenue, Suite 400 **Palo Alto, CA** **(Address of principal executive offices)**	**94306** **(Zip Code)**

(650) 800-6676
(Registrant's telephone number, including area code)

N/A
(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, $0.0001 par value per share	**VINC**	**The Nasdaq Stock Market LLC**
Warrants, exercisable for one-half of one share of Common Stock at an exercise price of $11.50 per share	**VINCW**	**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 8.01 Other Events.

On April 20, 2021, Vincerx Pharma, Inc. (the "Company") issued a press release announcing that the U.S. Food and Drug Administration (FDA) has cleared the Company's Investigational New Drug (IND) Application to initiate a Phase 1b dose escalation study evaluating VIP152, a highly selective PTEFb/CDK9 inhibitor, in patients with relapsed/refractory chronic lymphocytic leukemia (CLL) and Richter syndrome (RS). A copy of the press release is filed as Exhibit 99.1 hereto and is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits.

99.1 Press release dated April 20, 2021.

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.

Dated: April 20, 2021

Vincerx Pharma, Inc.

By: /s/ Raquel E. Izumi

Raquel E. Izumi

President and Chief Operations Officer

Exhibit 99.1

Vincerx Pharma Announces FDA Clearance of IND for Phase 1b Study of VIP152 in Chronic Lymphocytic Leukemia and Richter Syndrome

Dose escalation study in patients with CLL relapsed/refractory to venetoclax and BTK inhibitors on track to initiate in 2H2021

Vincerx's second clinical program for potential best-in-class CDK9 inhibitor

First patient in Phase 1b Study in MYC-driven R/R aggressive lymphomas and advanced solid tumors expected 2Q 2021

PALO ALTO, Calif., April 20, 2021 – Vincerx Pharma, Inc. (Nasdaq: VINC), a biopharmaceutical company aspiring to address the unmet medical needs of patients with cancer through paradigm-shifting therapeutics, today announced that the U.S. Food and Drug Administration (FDA) has cleared the Company's Investigational New Drug (IND) Application to initiate a Phase 1b dose escalation study evaluating VIP152, a highly selective PTEFb/CDK9 inhibitor, in patients with relapsed/refractory chronic lymphocytic leukemia (CLL) and Richter syndrome (RS).

"The IND clearance for VIP152 in CLL is an important milestone for Vincerx, marking our first IND clearance and now second clinical program for what we believe is the most selective CDK9 inhibitor in clinical development," said Ahmed Hamdy M.D., Chief Executive Officer of Vincerx. "Preclinical data for VIP152 show highly selective, ATP-independent, inhibition of CDK9 which translates to robust on-target activity across key gene targets. Most importantly, we believe this differentiated profile leads to encouraging early clinical activity, with demonstrated durable single-agent activity in hematologic malignancies and heavily pretreated solid tumors. This new dose-escalation study in CLL and Richter syndrome, expected to initiate before year end, builds upon our planned Phase 1b expansion cohort study in MYC-driven hematologic malignancies and solid tumors, which is on track to begin patient dosing in Q2 2021. We are proud of our rapid progress and look forward to continued execution as we advance VIP152 through our targeted oncology clinical programs to address a broad range of aggressive, resistant cancers."

The Phase 1b dose-escalation study will evaluate VIP152 in patients with relapsed/refractory CLL who have failed a Bruton tyrosine kinase inhibitor (BTKi) and venetoclax. Part 1 of the study will enroll CLL patients treated with ³2 prior regimens including either a BTKi or venetoclax. Part 2 of the study will consist of a CLL Phase 1b expansion which will enroll 20 patients with CLL relapsed/refractory to venetoclax and BTKi, and a RS Phase 1b expansion which will enroll 20 patients with CLL transformed to diffuse large B cell lymphoma (DLBCL) who have relapsed after, or been refractory to, at least 1 prior line of therapy for DLBCL and having MYC overexpression/ amplification/translocation. The Company expects to initiate the Phase 1b dose-escalation study in 2H 2021.

The Phase 1b dose-escalation in CLL and RS builds upon Vincerx's ongoing first-in-human (FIH) study in patients with advanced cancer. Part 2 of the FIH study is on-track to begin patient dosing in 2Q 2021 and will consist of two expansion arms. Arm 1 will enroll up to 30 patients with relapsed/refractory aggressive lymphoma including DLBCL, transformed follicular lymphoma, or blastoid mantle cell lymphoma. Arm 2 will enroll up to 40 patients with advanced solid tumors, including patients with ovarian cancer, triple negative breast cancer, castration-resistant neuroendocrine prostate cancer, and any other solid tumor with MYC aberration. All patients must have confirmed MYC overexpression or translocation.

About Vincerx Pharma, Inc.

Vincerx Pharma Inc. (Vincerx) is a recently formed clinical-stage life sciences company focused on leveraging its extensive development and oncology expertise to advance new therapies intended to address unmet medical needs for the treatment of cancer. Vincerx's executive team has assembled a management team of biopharmaceutical experts with extensive experience in building and operating organizations that develop and deliver innovative medicines to patients. Vincerx's current pipeline is derived from an exclusive license agreement with Bayer and includes a clinical-stage and follow-on small molecule drug program and a preclinical stage bioconjugation/next-generation antibody-drug conjugate platform. For more information, please visit **www.vincerx.com**.

Cautionary Statement

This press release 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, that are intended to be covered by the "safe harbor" created by those sections. Forward-looking statements, which are based on certain assumptions and describe future plans, strategies, expectations and events, can generally be identified by the use of forward-looking terms such as "believe," "expect," "may," "will," "should," "would," "could," "seek," "intend," "plan," "goal," "project," "estimate," "anticipate" or other comparable terms. All statements other than statements of historical facts included in this press release are forward-looking statements. Forward-looking statements include, but are not limited to: Vincerx's business model, pipeline, strategy, timeline, product candidates and expected results and timing of preclinical development and clinical trials. Forward-looking statements are neither historical facts nor assurances of future performance or events. Instead, they are based only on current beliefs, expectations and assumptions regarding future business developments, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Forward-looking statements are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control.

Actual results, conditions and events may differ materially from those indicated in the forward-looking statements. Therefore, you should not rely on any of these forward-looking statements. Important factors that could cause actual results, conditions and events to differ materially from those indicated in the forward-looking statements include, but are not limited to: general economic, financial, legal, political and business conditions and changes in domestic and foreign markets; the potential effects of the COVID-19 pandemic; risks associated with preclinical development and clinical trials, including development and trials conducted prior to Vincerx's in-licensing; failure to realize the anticipated benefits of the business combination with LifeSci Acquisition Corp.; failure to realize the benefits of Vincerx's license agreement with Bayer; risks related to the rollout of Vincerx's business and the timing of expected business milestones; changes in the assumptions underlying Vincerx's expectations regarding its future business or business model; Vincerx's ability to develop and commercialize product candidates; the availability and uses of capital; the effects of competition on Vincerx's future business; and the risks and uncertainties set forth in Forms 10-K, 10-Q and 8-K filed with or furnished to the SEC from time to time by Vincerx. Forward -looking statements speak only as of the date hereof, and Vincerx disclaims any obligation to update any forward-looking statements.

Contacts

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